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There are a number of jurisprudential approaches available in the law for utilization in solving problems and adjusting relationships between and among citizens. Different points of view will always serve to shed different lights upon these approaches and the internal elements which separate them, and the varying value judgments inherent in our society will lead to conflicting judgments concerning the efficacies of any one approach in comparison to another.

A search is now under way, on a pervasive national level, for solutions to various difficulties and conflicts involved in what is popularly known as "the pollution problem." This search has grown in the past decade from a common footnote in political and legal consideration to a powerful force destined to affect the life of every citizen in our complex society. Surprisingly, perhaps, the search has resulted in a good deal less diversity in jurisprudential approach than might have been expected. A brief survey of pollution control laws in the area of air pollution and water pollution leads to an appreciation of the efforts which have so far been implemented, and will thus serve well as a springboard for jurisprudential analysis of the totality of approaches potentially available to meet these needs. With those considerations in mind, such a survey has been appended to this article.

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AN OVERVIEW OF EXISTING STATE POLLUTION CONTROL LAWS

A glance at the appendix to this article graphically illustrates that the legal solution in each of the fifty states to the water pollution problem is very similar. A typical state's water pollution law centers around legislation creating a "board," which is given the responsibility for guiding and directing the antipollution effects under the law. "Pollution" will have been declared illegal by the implementing statute. The term "pollution" may be defined by the statute or may be left undefined, to be determined on an ad hoc basis by the board. The typical board will meet three or four times per year. The initial responsibility of the board is to examine the water pollution situation within the state and set "standards," or limits of pollution which shall not be exceeded. The guidelines for the determination of the standards are quite flexible under the statutes. The *primary* requirement is usually that the standard set be sufficient to comply with the federal standards so that federal financial aid might be forthcoming; classification of the various types of water (lakes, rivers, streams), with separate standards for each classification as to the amount of pollution which will be tolerated, may or may not be required.

After establishing appropriate standards, the board may require registration of all sources of pollution within the state. It may grant "permits" to "new or increased" sources of water pollution, presumably with reference to the date of the publication of standards.

Those sources of pollution which have been called to the attention of the board may, in some cases, be ordered to immediately abate the pollution. More likely, however, the board will merely be empowered to require the submission of a "plan" for the "reasonable" abatement of the pollution in the future. Once the abatement plan is implemented, either by acceptance of the polluter's submitted plan of abatement, or by the board's own initiative in ordering abatement, the polluter must comply so that his polluting activities are abated within an appropriate time.

The setting of standards, however, does not necessarily mean that pollution of the water will be immediately abated; these standards must still be enforced. A particular source of pollution, before becoming subject to any "enforcement" procedures must

(a) have come to the attention of the board, (b) have exceeded the local standards of pollution, (c) have been put on notice, (d) have become subject to a plan of abatement, (e) have exceeded the time allowed for abatement under the plan, and (f) have failed to reduce its pollution activity to the designated standard.

In the event that enforcement is required, the board will be empowered to assess fines, as criminal penalties, in practice ranging from $100 to $1000 per offense, even though the potential fine may be as high as $25,000 per day. The board may also obtain injunctive relief prohibiting the future polluting activities of the source; or it may assess actual damages; or it may proceed with a "clean-up" of the pollution, and assess the clean-up charge against the polluter. It would be at this stage of the proceedings, in all likelihood, that the polluter would appeal the assessment of the board, or that the board would take action against the polluter to collect. There are, however, extremely few reported cases of this nature.

The structure of the air pollution statutes parallels almost exactly that of the water pollution statutes. The only real difference is that a considerably larger degree of flexibility and discretion seems to be allowed in regard to air pollution. Under air pollution standards, much more often than in the case of water pollution, a "variance board" or "local board" will be allowed to set specific standards for the region within its jurisdiction.

All of the water pollution and air pollution statutes enacted in the fifty states seem to be based upon a "nuisance" criterion. That is, the legislation provides for a determination concerning the seriousness of the pollution presented in any given case and for the machinery to terminate the pollution in the event it is of a serious enough nature to require action at all. The statutes are designed to eradicate all pollution which cannot be controlled within reasonable limits, to reduce controllable pollution, and to allow other pollution to continue without penalty. There are only a few deviations from this "nuisance" approach; specifically, the provisions for tax exemptions for the installation of pollution control devices and for "fines" based not upon any arbitrary figure, but upon the cost of clean-up, represent a recognition of the reality that pollution is a relative matter.

COST ALLOCATION AS AN ALTERNATIVE

As pointed out in the introductory paragraphs of this article, the law functions most effectively and helpfully as a framework for solving problems and adjusting the effects of the shifting relationships between and among citizens. It is, of course, true that the law operates also as a standard to guide conduct, but its efficacy in that regard stems ultimately not from any inherent sanctity of the law in itself, but rather from the realization that the law will be utilized to adjust relationships "after the fact," if necessary; this serves definitionally to give the law a measure of substantive value in inducing subject individuals to take steps to voluntarily adjust the same relationships "before the fact." The traditional approaches to the study of jurisprudence (natural law,[1] positive law,[2] and legal realism and sociological jurisprudence[3]) differ somewhat in their interpretations of the sources of law and the proper substantive content of the law, but they all have in common the recognition that the *function* of the law is to adjust relationships between people.

The primary need to adjust relationships between people occurs in the event of a deviation from the status quo. Should the existing relationships between people at any particular time remain constant, unchanged and unchallenged, there would be little need for concomitant change or innovation in the law or its operation. Indeed, to the extent to which such a static society existed, the institution of law in its entirety would be superfluous. It is the very nature of our civilized society, however, that existing relationships between individuals have always been and continue to be constantly under the stress of potential readjustments. The law provides a framework for society to determine the effect and outcome of these readjustments.

The law of water rights, for example, has been shaped over the years to adjust the relationships between individuals with competing needs and claims to the use of water, particularly in those situations where the claims are so potentially conflicting

[1] THE NATURE OF LAW: READINGS IN LEGAL PHILOSOPHY (M. Golding ed. 1966).
[2] *Id.* at 59.
[3] *Id.* at 110.

that it seems unlikely that the needs of both parties can be met with full success. In such a case, then, the "status quo" would be represented by a situation in which each party is willing and able to voluntarily continue in accordance with previously existing water rights. When any such party is no longer willing to so agree, the status quo is threatened by the change which will occur when that party's action, inconsistent with the previously determined rights, ensues.

The common law concept of riparian rights, which was adopted by the Atlantic and middle-western states, is based upon the theory that the water running past the shores of the landowner is not susceptible to ownership. Such riparian owners have the right to use the water reasonably, that use being restricted in such a way as not to impair the same rights of the lower riparian owner.[4] It would then appear that the rights concerning the quality and the use of water are subject to the rights of the lower riparians to receive reasonably pure water.

The opinion in the case of *Dumont v. Kellog*[5] is illustrative of the manner in which many midwestern states applied the riparian doctrine. The "reasonable use of streams doctrine" provides that a state may make reasonable use of the waters passing along its shores. A reasonable use seems to be that use which will not adversely affect the rights of other lower riparians. The application of this doctrine can be easily recognized as an attempt to so adjust the relationships among individuals as to mitigate the threat of a change from the status quo, in accordance with our preceding analysis.

A second concept of water rights, prevalent in the western and southwestern states, is the "prior appropriation doctrine." Under this doctrine the priority of appropriation or application of the water to a beneficial use, gives the appropriator a right to use the water so appropriated, as long as that use is maintained, even if it proves detrimental to a subsequent, lower appropriator.[6] The doctrine appears to be based upon the phrase "first in time, first in right," and arose when gold was discovered in California. It

[4] Jacobson, *Stream Pollution and Special Interests*, 8 WIS. L. REV. 98, 100 (1933).
[5] 20 Mich. 420, 18 Am. R. 102 (1874).
[6] Jacobson, *supra* note 4, at 108.

spread from that territory to Arizona, Idaho, Nevada, New Mexico, Utah, Wyoming, and parts of Oregon, Washington and Montana, where it was suitable to laws of irrigation.[7] The doctrine itself is different from that of riparian rights, but the *purpose*—elimination of the threat of damages associated with a change in the status quo—is the same.

Another doctrine which serves to clearly illustrate the function of law as a tool in the adjustment of the effects of deviations from the status quo is the appropriately named equitable "doctrine of changed conditions."[8] Under this doctrine, private land use restrictions of equitable origin (such as reciprocal negative easements and equitable restrictive covenants) may be denied application by a court of equity upon the basis of proof that the status quo in the neighborhood has so changed as to render the continued effectiveness of the restrictions inequitable. The very title of the doctrine is illustrative of its purpose in assuring that the application of law must always be commensurate with the status quo, and that the operation of the law must change as the status quo ("conditions" in this case) changes.

Indeed, not only specific doctrines, but entire areas of the operation of the law, are designed, or have grown up, to meet this particular need. Property law, for example, is effective as a tool for the adjustment of individual relationships incidental to transfers in the ownership of real estate.[9] As ownership of land is altered, the status quo is disrupted and new and different relationships between the involved parties are formed. It is the need to determine the changes in these individual relationships which is met by the application of the principles of real property law. The entire common law approach of contract law is a more general application of the same idea.[10] The purpose of such contract law is not to provide substantively for new relationships between individuals after a disturbance of the status quo, but rather to provide a method whereby individuals may determine these new relationships for themselves, creating their own substantive rights and liabilities by voluntary manipulation of and compliance with the

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[7] *Id.* at 108.
[8] *See generally* Annot., 76 A.L.R. 1358 (1931).
[9] R. POWELL, THE LAW OF REAL PROPERTY ¶ 11, at 22 (1969).
[10] A. CORBIN, CORBIN ON CONTRACTS § 1, at 2 (1952).

framework of procedural requirements provided for that purpose. Each of the above illustrations is, therefore, recognizable as *procedural* in approach. The law in each case does not provide substantively for new rights and liabilities in exchange for old, but rather provides a framework whereby individuals may, by their own actions, determine for themselves the effect upon them of such changes in their rights and liabilities as will occur as the result of their participation, active or passive, in a variation or potential variation in the status quo.

This traditional common law procedural approach is not, however, the only method by which the law may be used as a tool in adjusting the effects of deviations from the existing order. Sometimes new rights and liabilities are substituted for old, not through the procedural intent and manipulations of the parties, but by governmental fiat. In this situation, the purpose of law is not to protect the incidental rights and liabilities of individual citizens, but rather to positively change the status quo itself, *along with* the incidental effects of the law. The fiat may take the form of outright revolution.[11] More important for legal purposes, however, are those occasions where the rights and liabilities of individuals are determined by new legislation. Such legislation is usually based not upon the idea that the status quo is being avowedly changed, but rather upon the idea that the status quo has *already* changed, usually over a period of years.

Examples of such legislation are common. Wage-hour laws[12] are not designed under the common law model to allow individuals to determine the changes in their rights and liabilities which will be incidental to the alteration of the status quo, but rather operate positively in *derogation* of those very common law traditions. The rationale for this different approach has been that the status quo in the wage-hour situation has subtly and slowly shifted over a period of years by the investiture of a great amount of power in employers, so that there exists no continuing equality in bargaining power between potential employers and employees. Under these circumstances, it is reasoned, the tradi-

[11] Our own American Revolution serves as an excellent example.

[12] The Fair Labor Standards Act, 29 U.S.C. § 201, minimum wage law was first upheld in West Coast Hotel Co. v. Parrish, 300 U.S. 379 (1936). *See also* L. REYNOLDS, LABOR ECONOMICS AND LABOR RELATIONS 220, 545-49 (3d ed. 1959). For background of federal legislation, see M. FORKOSCH, A TREATISE ON LABOR LAW §§ 62, 80 (2d ed. 1965); for state legislation, see §§ 81-82.

tional common law rights of self determination will be meaningless to the employee because the required assumptions supporting the validity of the system are no longer correct, and the entire system is resultantly malfunctioning. If the common law system is to continue to function in such situations, there must be some assurance that the bargaining individual employees do in fact have the rights of self-determination which are assumed and furthered by the operation of the system.

An alternative route, however, is to provide for certain substantive rights and liabilities by legislation. This involves a change in the status quo per se, rather than providing the involved individuals with a method for adjusting rights and liabilities *incidental* to a change in the status quo. The reason for such legislation has often been "making the best of a bad situation," or providing substantively for rights and liabilities because of a failure of the common law approach to allow individuals to properly do so themselves.

Another example of the substantive approach to adjusting relationships between people, based upon a different rationale, is the development and use of zoning legislation.[13] Land use restrictions have traditionally been available through the common law approach to real property transactions of deed restrictions enforceable both at law and in equity. The "doctrine of changed conditions" mentioned above was an allusion to such privately created land use controls. But in addition, land use controls have come to be applied substantively through legislation. These public land use controls are called zoning. Through zoning the rights and duties of property owners are altered substantively by legislation, in derogation of their more traditional rights to make these changes in the status quo themselves through the apparatus of property law. The basis of zoning legislation is "the police power" operating in preservation of "the general welfare," presumably self-defining concepts incapable of more specific delineation.[14] The reasoning seems to be that there is some will to be served which should be superimposed over the will of the individual landowners as they go about the business of utilizing the common law approaches to property restrictions they may implement.

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[13] B. LIEBERMAN & W. RABIN, LAW OF ZONING IN PENNSYLVANIA 1-2 (1958).
[14] Village of Euclid v. Ambler Realty Co., 272 U.S. 365 (1926).

The rationale of the wage-hour legislation, *i.e.*, that common law methods for providing for self-determination in the adjustments of rights and liabilities inherent in changes in the status quo were the ideal and that legislation should be undertaken only where necessary to correct the defects springing from malfunctions in that common law system, was prevalent in the early years of American law.[15] The ancient doctrine that the common law approach to adjustment of individual rights and liabilities is inherently inferior to some undefined but socially superior will, on the other hand, is recognized throughout the world. This rationale for the substantive approach to law has been the tool of rulers throughout history.[16] Increasingly, it appears, this doctrine is being used in connection with or in preference to the idea of self-determination to justify legislation in America.[17] Pollution control laws as described heretofore may possibly be evidence of this trend.

The outlined legislation of the fifty states for the control of air and water pollution is not clear in regard to these questions of jurisprudential analysis. The fact exists, however, that these pieces of legislation provide in almost every case for substantive change in the rights and liabilities of the involved parties, either in the statute itself or by delegation to some administrative body or bodies, rather than for a framework within which affected individuals may manipulate a system to adjust the relationships between themselves in accordance with their self-recognized needs as determined by the changes in the status quo. Clearly, pollution control involves *retrospectively* a situation whereby the status quo has changed without recognition at the time the change occurred, so that some remedial measures are necessary. *Prospectively*, however, the alternatives of providing for the proper operation of the common law approach or improving its system of procedural manipulations so that it will work better are abandoned in favor of substantive declarations of rights. The rationale for this choice has not generally been made explicit, and the result is the appearance that the choice has been made irrationally,

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[15] See note 12 *supra*.

[16] Woodroof, *A Jurisprudential Look at Planning and Freedom in the American Ideology*, 39 U.M.K.C. L. REV. 380 (1971).

[17] *See, e.g.*, Harden, *The Tragedy of the Commons*, 163 SCIENCE 1243 (1968).

perhaps by default, rather than as a result of any careful consideration.

The private law counterpart of legislation is nuisance.[18] Nuisance is procedural in application since it involves a "balancing of the equities" between the individual parties involved, rather than a substantive declaration of rights.[19] It is substantive in effect, however, inasmuch as the injunction which provides the remedy in nuisance actions results in either the enforced termination of the activity in question, if the injunction is granted, or no relief at all to the complaining parties, if it is not.[20]

Characterization of such results as "substantive in effect" can perhaps be best understood in comparison with the effect of the "procedural" common law jurisprudential approaches. The application of these traditional approaches does not result in enforced prohibition of the subject activities, but rather in an allocation of costs to such activities based on the degree to which those activities involve a detrimental shifting from the status quo vis-à-vis another individual affected by the activity. This allocation of costs results in an automatic individual balancing of the equities in regard to any particular action; that is, the adjustment of the relationship between the parties involved is determined by those parties in their allocation of their costs. The operation of the tort law, in regard to trespass on land, serves as an example. Damages sufficient to make the victim landowner "whole again" may be recovered from the trespassing tortfeasor.[21] This common law approach to adjustment of relationships between individuals is thus clearly based upon cost allocation, with several theoretically positive results. First, the landowner suffers no loss, inasmuch as he is theoretically "made whole" again;[22] the innocent party does not bear the burden of the activity. Second, the costs of the activity, in the form of damages, are shifted upon the perpetrator of the activity,[23] the party who has sought to change the status quo, he bears the costs generated by his own voluntary action, and

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[18] J. BRECHER & M. NESTLE, ENVIRONMENTAL LAW HANDBOOK §§ 6.18, 6.20 (1971) [hereinafter ENVIRONMENTAL LAW HANDBOOK].
[19] H. STREET, THE LAW OF TORTS 221-22 (4th ed. 1968).
[20] *Id.* at 215.
[21] *Id.* at 69-70.
[22] *Id.*
[23] H. WILLIS, PRINCIPLES OF THE LAW OF DAMAGES 14 (1910).

he has the alternative of foregoing the action and the costs. Third, potential tortfeasors are put on notice that changes in the status quo must be accompanied by concomitant responsibilities.[24] Theoretically, the potential tortfeasor could pay the damages to the victim landowner in advance, obtaining in exchange the right to engage in the subject activity, through use of the procedural framework of property law, and thus avoid the trespass by converting the change in the status quo to one which is acceptable to all of the parties involved. This, at least, is the common law ideal.

Adjustment of the relationships between individuals also includes, of course, the adjustment of the relationship between citizens and the government, and the procedural jurisprudential approach has served equally well for this sort of public-private situation. In condemnation actions, for example, the sovereign government may obtain rights of property only upon payment of "just compensation" to the aggrieved landowner.[25] The ubiquitous "will" previously alluded to in regard to legislative justification can also be seen in operation here, in that the right of condemnation does not require purchasing the property on the open market;[26] but within that limitation, the allocation of the cost of public improvements is achieved on an individual, procedural basis, rather than upon a substantive basis. The same reasoning is inherent in the legal restrictions concerning "special assessment" in real property taxation, for the amount of the assessment must not exceed the value of the "special benefit" conferred upon the land in question,[27] and in limitations upon subdivision exactions, whereby the government may require a subdivider of land to pay only for those costs which are "specifically and uniquely attributable" to his subdividing activity, costs which would otherwise be cast off upon the community.[28]

Several of these common law approaches have been used in

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[24] *Id.* at 28.

[25] This standard of "just compensation" is set by the fifth amendment to the Constitution and it is deemed to apply to the states through the "due process" clause of the fourteenth amendment. Missouri Pacific Ry. v. Nebraska, 164 U.S. 403, 417 (1896).

[26] T. LEVEY, CONDEMNATION IN U.S.A. § 4 (1969).

[27] J. KEITH, PROPERTY TAX ASSESSMENT PRACTICES 34-35, 37-38 (1966).

[28] For explanatory treatment in detail of this limitation, *see* G. LEFCOE, LAND DEVELOPMENT LAW ch. 3 (1966).

attempting to solve the problems of pollution control. Nuisance suits, for example, were fairly common in early efforts to achieve some form of pollution control, before the problem became widespread and nationally important.[29] The particular hybrid nature of the nuisance doctrine, however, led to its downfall. The remedy involved in nuisance litigation, termination of the offending activity, is very harsh, and its application is dependent upon the procedural approach of "balancing the equities."[30] Of necessity, in order to restrict the operation of the doctrine within the demands of "reasonableness," the balancing of the equities involves consideration not only of the pollution problems involved, but of the consequential problems which would be generated by the remedy. Given these considerations, termination of the offending activity, and, therefore, successful application of nuisance theory, is only obtained in the very grossest cases.

The doctrine of condemnation, through its offspring "inverse condemnation," has also been applied to pollution control.[31] Inverse condemnation has particularly been found helpful as a legal approach to that form of air pollution known as "noise pollution." There has been considerable litigation over the liability of airport owners and operators to neighboring property owners for damages resulting from noise and vibration. All courts agree that some residents aggrieved by substantial noise should have a legal remedy.[32] They also agree, however, that the proper remedy is not an injunction preventing airport operation,[33] thus demonstrating the difficulties of the application of the nuisance approach. The policy underlying this universal view is that however disturbing or damaging noisy operations may be to some airport area residents, the general social need for such operations is a paramount interest.[34]

Over the past decade the most successful theory of recovery has been inverse condemnation, under which it is asserted that

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[29] Comment, 9 B.C. IND. & COM. L.R. 712, 755 (1968).

[30] ENVIRONMENTAL LAW HANDBOOK, *supra* note 18, § 6.22.

[31] *See generally* Annot., 2 A.L.R.2D 677 (1948).

[32] Griggs v. Allegheny County, 369 U.S. 84 (1962); Batten v. United States, 306 F.2d 580 (10th Cir. 1962); Thornburg v. Port of Portland, 376 P.2d 100 (Ore. 1962).

[33] Fleming, *Aircraft Noise: A Taking of Private Property Without Just Compensation*, 18 S.C.L. REV. 593, 595-96 (1966).

[34] Strunck, *Airport Zoning and Its Future*, 50 A.B.A.J. 345 (1964).

aircraft noise has resulted in the taking of private property for public use. An action in inverse condemnation differs from an eminent domain proceeding in that the private property owner, rather than the governmental unit, institutes the action. In both, the claim is that the activity under governmental authority has taken or damaged some or all of the claimant's property rights without paying him just compensation.[35] Damages recoverable for airport noise under inverse condemnation are based upon loss of market value in the plaintiff's property, with some cases suggesting that recovery in one year would not bar additional recoveries in later years as subsequently noisier operations further diminish property value.[36] Recovery for the loss of property values due to aircraft noise has been allowed in two cases decided by the United States Supreme Court. Both cases, *United States v. Causby*[37] and *Griggs v. Allegheny County*,[38] stressed the penetration of airspace above plaintiff's land and the substantial property losses caused by the nuisance of aircraft noise and vibration. The leading case of *Batten v. United States*[39] stipulates overflight as a prerequisite to recovery, primarily upon the basis of the trespass language in *Griggs* and *Causby* and a pair of cases involving railroads[40] which denied recovery where there had been no physical invasion and the deprivation was either temporary or unsubstantial. "The policy underlying the physical trespass requirement seems to have been to reduce the danger of a stifling liability upon quasi-public activities by discouraging a host of suits for inconsequential interferences with private property."[41] It is possible that the court in *Batten* perceived a similar danger to air transportation, and it can be inferred that the court was determined to limit recovery for a taking to as small a number of plaintiffs as possible by insisting upon penetration of airspace.[42] At any rate, the doctrine of inverse condemnation has thus been severely limited, and it is not applicable to private pollution.

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35 Martin v. Port of Seattle, 391 P.2d 540 (Wash. 1964).
36 City of Jacksonville v. Schumann, 167 So.2d 95, 98 (Fla. 1964).
37 328 U.S. 256 (1946).
38 369 U.S. 84 (1962).
39 306 F.2d 580 (10th Cir. 1962).
40 Richards v. Washington Terminal Co., 233 U.S. 546 (1914); Baltimore & P.R.R. v. Fifth Baptist Church, 108 U.S. 317 (1883).
41 Comment, *Jet Noise in Airport Areas: A National Solution Required*, 51 MINN. L. REV. 1087, 1094 (1962).
42 *Id.*

The doctrine of trespass would appear to have greater value in pollution control, but its application has been thwarted by the difficulty of proving legally acceptable damages.[43] The problem of proving damages can also be seen as the root of the similar failures of the doctrines of nuisance and inverse condemnation, within the legitimate operating area of those doctrines. Aforementioned problems with the application of the nuisance doctrine, for example, could be easily overcome if the complaints could be brought jointly by, or on behalf of, all parties affected by the alleged nuisance,[44] and if those parties could prove *all* of the damages they suffered.[45] Neither of these solutions has generally been possible under existing law, with the resulting downfall of the nuisance doctrine as a successful tool in pollution control. Of course there will always be cases in which a true balancing of the equities, including damages to all of the parties affected by the nuisance, would require that the offending activity be allowed to continue; and plaintiffs in such cases as these will inevitably be forced to depend upon some other theory, perhaps trespass, for relief. But many more lawsuits would likely be successfully undertaken if an alleviation of the "damages" problem was provided. (The outcome of such successful cases—an injunction prohibiting the continuance of the offending activity—would simply illustrate that the operation of that offending activity generated costs in excess of benefits provided from its continuance. Even though the injunction likely resulting from application of the nuisance doctrine is substantive in effect, it would operate similarly to the common law approach in that the offending activity could be continued upon payment in advance to the injured parties of the amount of their damages. This contingency might be important in those cases where, even though the costs of the activity could not be lessened, the benefits of the activity might be increased.)

These evidentiary considerations in the proving of damages have served to severely limit the application of the doctrines of condemnation and inverse condemnation to the problems of pollution control. Provable damages in condemnation actions

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[43] ENVIRONMENTAL LAW HANDBOOK, *supra* note 18, § 6.23.
[44] *Id.* at §§ 4.10, 4.21, 4.18.
[45] Comment, 9 B.C. IND. & COM. L.R. 712, 717 (1968).

have traditionally been somewhat limited, with certain types of damages not recoverable;[46] the same limitations are applicable to cases in inverse condemnation[47] as inherent in the "overflight" requirement.[48]

There seems to be no sound jurisprudential basis for limiting provable damages in common law actions. The traditional complaint which has served to bar certain forms of damages is that such damages are "speculative" and "impossible to ascertain."[49] There can be no doubt, of course, that there is some validity in this complaint. There are, however, three additional considerations which serve to mitigate the importance of these difficulties and lead to the conclusion that examination of all items of damages, however provable, within the operation of the traditional common law approaches, might present the most jurisprudentially profitable method of dealing with the pollution problem.

First, there is the possibility that damages which have historically seemed to be absolutely unprovable and speculative might not be as difficult to deal with in our modern age of computer technology as they have been in the past. A "simulation model" represents the elements of a situation by arithmetic and logical processes which can be executed on a computer to predict the dynamic properties of the original situation.[50] Through the use of such a model, costs and damages caused by pollution could perhaps be accurately computed and detailed information provided concerning the identities and proportionate responsibilities of the parties causing the pollution and the details of the damages suffered by each individual land owner affected by that pollution.[51] Dollar amounts could then be assessed to the polluters and awarded to the victim landowners.

In determining costs, there has traditionally been a problem inherent in the economically important philosophical notion that

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[46] I. LEVEY, *supra* note 26, § 29.

[47] *See generally* Annot., 2 A.L.R.2d 677 (1948).

[48] See notes 36-39 *supra*.

[49] T. SEDGWICK, A TREATISE ON THE MEASURE OF DAMAGES §§ 170, 932 (9th ed. 1912).

[50] Woodroof, *Pollution Control: Why Not Cost Allocation?*, 21 DRAKE L. REV. 133 (1971).

[51] For an example of such use in rudimentary form, see the "preliminary report" of the Delaware Estuary Comprehensive Survey, as reported in L. JAFFE & L. TRIBE, ENVIRONMENTAL PROTECTION part III (1971).

air and water are "free" goods.[52] It would appear that this notion has already been overcome in our time,[53] so that the only remaining difficulty is not understanding the *nature* of the costs, but merely determining their *amount.* As to damages, the existing law concerning noise pollution from overflight and the riparian and prior appropriation doctrines would seem to be sufficient as a basis for establishing the right of individual landowners to recover for unauthorized use of their air or water, just as they have an earlier recognized right to recover for unauthorized use of their land. For *determining* both costs and damages, simulation models may be undertaken which would serve in the future to render provable damages which have been barred in common law actions. Costs and damages of this kind, to the extent that they are successful in allowing the required internalization of costs on the part of *all parties* (both polluters *and* victim landowners, who themselves may be potential polluters in regard to some *other* parties) through the operation of common law principles, will also serve to protect the interests of non-landowners as well.

Second, the barring of evidence concerning any particular types of costs (*i.e.*, damages) in court actions is a futile exercise, in that the issue of determining costs can in no way be ultimately avoided. The pollution problem will not go away spontaneously. To the extent that evidence of damages is barred in common law actions, those selfsame damages will be considered legislatively and administratively in enactment and implementation of substantive solutions to pollution problems.[54] The damages will, therefore, in any event, be considered; only the forum will change. The *results* of such a forum change, the abrogation of the strictures of traditional legal analysis in a court of law in favor of such hearings as are usually provided by legislative and administrative tribunals, can hardly be viewed as less than seriously inimitable to the proper adjustments of relationships between the parties involved on the basis of costs to be allocated to them.

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[52] This is not a provincial philosophical problem; the same difficulty has helped lead to serious pollution problems in the U.S.S.R. Goldman, *The Convergence of Environmental Disruption,* 170 SCIENCE 37 (1970).

[53] "We still think of air as free. But clean air is not free, and neither is clean water. The price tag on pollution control is high." President Richard M. Nixon, The State of the Union Address by the President of the United States, H.R. Doc. No. 91-226, 91st Cong., 2d Sess. (1970).

[54] *See generally* L. JAFFE & L. TRIBE, *supra* note 51.

Third, the very understanding of the nature and purpose of cost allocation itself seems to dictate that the common law approaches should be utilized wherever possible. It is the common law approaches which have traditionally provided for attempts to allocate the costs of activities which disturb the status quo and also to assure that victims are fully compensated and that such activities bear the full costs of their disruptions. To the extent that the substantive approach, legislation, is viewed as a second-rate attempt justified by necessity to achieve some sort of equity where the common law system has failed, it is perhaps properly remedially applicable retrospectively to the pollution which now exists but even so it would appear to be seriously inferior to the common law system as an approach to *prospective* pollution control. To the extent to which the substantive approach to pollution control represents acceptance of the other rationale, the imposition of some ubiquitous superior "will" upon the wills of the individuals involved, in derogation of the views of the affected parties concerning the appropriate allocation of the costs and the resulting market decisions, the rationales are as old as civilization, and as groundless now as they have always been.

APPENDIX A.

STATE WATER POLLUTION STATUTES

ALABAMA—ALA. CODE tit. 22, § 140 (1965)

The Alabama Water Pollution Act appears to contain all the prerequisites of successful, effective legislation. All new or increased sources of pollution after 1965 must be approved for operation by the Pollution Control Board (§ 140(9)(j)), and those who operate such sources without the necessary permit face a fine ranging from $100 to $10,000 (§ 140(9)(p)). In addition, the Board may recover punitive and compensatory damages for all injury caused by the illegal discharge of pollutants (§ 140(9)(q)).

The definitions section is seemingly far-reaching at least in that the term "industrial wastes" include wastes from mining and refining operations (§ 140(7)), and "person" includes both municipal government and industry (§ 140(7)). The Water Improvement Commission was given powers to set limits on pollution, with the goal to have the limits strict enough to meet federal standards, and thus, receive federal aid (§ 140(9)(b)).

This Act, however, falls down in the areas of enforcement procedures and the construction of the Commission. Under § 140(9) only those polluters who are notified by the Commission must prepare to abate that pollution. After notification, the alleged polluter has six months in which to present a suitable plan for abatement. If the first plan is unacceptable, the polluter has an additional six months to

reformulate a plan. The Act sets no limit on the number of six-month extensions which may be granted. When the plan is finally approved, however, the polluter has up to seven years to comply with the plan. During this time he is allowed to pollute freely, presumably; the Act mentions nothing about immediate abatement.

Another problem is seen in § 140(9)(b) of the Act, which provides that the Water Improvement Commission shall be composed primarily of industry leaders, engaged full-time in industrial business and part-time in pollution control business, who serve without salary and who are required to meet only twice yearly. It appears that a commission to control pollution caused primarily by industry, which is run by members of the industry, might be somewhat less effective than a commission otherwise constituted.

No cases challenging or testing the Alabama Act or any of its provisions, or any actions taken under its authority have been reported.

ALASKA—CODE OF ALASKA tit. 46, ch. .05 (1949), *as amended* 1968; replaced by ALASKA STAT. § 46.03.050 (1971); see closing paragraph of appendix

ARIZONA—ARIZ. REV. STAT. ANN. ch. 16, art. 1 (1967)

The Arizona Water Control Council was given substantial powers to end pollution (§ 36-1856). The Act states that it is unlawful for any person in the state to pollute (§ 36-1858), pollution presumably being defined by the Council according to the circumstances of the particular problem at issue. The Council may require all sources of pollution, both present and future, to obtain a permit, thereby registering and presenting such sources for review and control (§ 36-1859). In addition the Act made injunctive relief available to the Council (§ 36-1864).

Weaknesses in this Act seem apparent. It is unlawful to pollute, but it is up to the Water Control Council and the state legislature, which allocates funds for the Council, to provide adequate manpower to enforce the Act. The weapon of injunctive relief seems harsh, and might be disastrous if applied to many industries or agricultural businesses within the state.

ARKANSAS—ARK. STAT. ANN. § 82-1901 (1965)

The Arkansas Pollution Control Commission was first formed in 1949, with the latest amendments to the Act passed in 1965. It is the duty of the Commission to develop a comprehensive plan for the statewide control of pollution (§ 82-1904). The Act prohibits pollution, with remedies for violations at law and in equity (§ 82-1909). The members of the Commission serve without salary and are required to meet only four times each year (§ 82-1913).

CALIFORNIA—CALIF. WATER CODE ANN. ch. 284 (West 1967)

The California Water Quality Control Act divides the state into nine local regions (§ 13200). It requires any person who discharges wastes into any of the waters of the state to inform the Water Quality Control Board of the practice and include a filing fee of $1,000 with the statement (§ 13261). If pollution occurs and the state must clean up, the costs of the clean-up are charged to the person or company adjudged responsible (§ 13304(b)). Penalties for violators range up to a $6,000 fine for each day of continued pollution (§ 13350(a)).

There have been no cases reported in California concerning this statute. A telephone call to the head of the state Control Board indicated that the nine regional offices are extremely busy and effective, and that few appeals are actually taken because violators seem prone to accept Board decisions.

COLORADO—COLO. REV. STAT. ANN. § 40-12-22 (1953), *as amended* (1966)

The Pollution Control Commission of Colorado was established in 1963. The members of the Commission work only part-time and are allowed to earn a maximum of $1,200 from their pollution control work (§ 3(2)). The Commission has the duty to create a comprehensive plan for the control and abatement of water pollution (§ 5(c)).

Section 8 of this Act appears puzzling, and indeed, contrary to the purposes of the Act. It should imply that, as a state policy, pollution should be permitted as far as possible. Section 8(4) indicates that the Commission has very little actual control over present or future violators, although Section 9 states that pollution in violation of a Commission order is illegal. Section 9, however, is not supported by the threat of fines or jail sentence, but only by a weak injunctive power. The dangers of non-compliance with the statute do not seem apparent from reading the statute.

In its original form, (COLO. REV. STAT. ANN. § 40-12-22 (1953)) the Colorado Act was tested in the courts. In People v. Hupp, 123 P. 621 (Colo. 1912), the court upheld the constitutionality of a statute which fined any person who polluted the waters of the state.

While some laws appear to be gutless as a result of non-enforcement, this one appears gutless with or without enforcement.

CONNECTICUT—CONN. GEN. STAT. ANN. tit. 25, ch. 54 (1967)

The Connecticut Water Pollution Act creates a comprehensive plan for the control and abatement of water pollution (§ 25-54c(b)), and the statute forbids any person to pollute the waters of the state in violation of the Act (§ 25-54f). The Connecticut Act, however, goes further than most; it expressly states that any city which is polluting may be ordered to stop immediately (§ 25-54g).

Section 25-54h says that any pollution, including that discharged prior to the passage of the Act, may be abated at the will of the Commission, leaving corporate officers jointly and severally liable for the damage, as well as making tenants and owners of property jointly and severally liable.

Section 25-54n provides injunctive relief against violators of Board orders, and one who "knowingly" or willfully violates such an order is liable to pay a fine of up to $1,000 per day for each day of continued offense (§ 25-54q).

The difficulty with this law is that no polluter need act to abate his pollution until a Commission order, which follows a hearing, is made. With an understaffed and under-budgeted Commission, such pollution may never be discovered and stopped, thus making even the strongest-looking legislation weak.

Within the Connecticut statute is a specific mention of pollution from cities. A long history of cases, however, wherein lower riparians have sued cities for polluting the streams which flow through the land of both plaintiff and defendant, have been decided in favor of the lower riparian, apparently for the sole reason that the city should have exercised its power of eminent domain and taken over the land before the plaintiff initiated the suit. For not doing that, the court gives recovery to the plaintiff, thus telling the city that pollution is all right, if you do it in proper fashion. Morgan v. City of Danbury, 35 A. 499 (Conn. 1896); Nolan v. City of New Britain, 38 A. 707 (Conn. 1897); Platt Bros. v. City of Waterbury, 45 A. 154 (Conn. 1900); Watson v. New Mulford, 45 A. 167 (Conn. 1900); Dudley v. New Britain, 59 A. 89 (Conn. 1904); Gorham v. New Haven, 66 A. 505 (Conn. 1907); Donnelley Brick Co. v. New Britain, 137 A. 745 (Conn. 1927); New England Die Co. v. West Hartford, 159 A. 470 (Conn. 1932).

DELAWARE—DEL. CODE ANN. tit. 29, ch. 80 (1966)

The Delaware Water Pollution Control Council is composed of members of the Soil and Water Conservation Commission, and these members are not paid (§ 6002). The statute provides that willful or negligent polluters may pay fines of up to $500 for each day of continued pollution (§ 6013), although water used for farming is not affected by this statute (§ 6102). Further, the state requires that the Council create a comprehensive plan to abate and control pollution (§ 6104A.1), and defines pollution as including wastes from mining and industrial processes (§ 6302). In Delaware, avoidable pollution is illegal (§ 6419), although no penalty for violation in this provision is mentioned, save injunctive relief against persons who fail to comply with a Council order (§ 6305).

FLORIDA—FLA. STAT. ch. 403 (1969)

The Florida Water Act provides a perfect opportunity to demonstrate that a statute which appears strong can in reality be a weak, almost useless, Act. It is the duty of the Florida Water Control Commission to prepare a comprehensive plan for the control and abatement of pollution; to establish a permit system regarding the allowable limits of pollution throughout the state; to exercise injunctive relief against those who flaunt Council orders; to impose fines of up to $1,000 per day of continued violation, with an accompanying jail sentence of up to one year; to collect from the polluter the costs of cleaning up the damage he caused, and so on. This appears to be an excellent and effective provision which should have all but solved the water pollution problem in Florida. It is the composition of the Control Commission that prevents this Act from being as effective as it should be.

The Water Pollution Control Commission is composed of the Governor, the Secretary of State, the Attorney General, the Commissioner of Agriculture and two citizens at large. All the members serve without pay for their work. While the Commission may work actively towards the goal of clean water, it would appear that the members' occupations would be more likely to receive their major effort and time. If the problem is full time, can the solution be achieved through part time work?

GEORGIA—GA. CODE ANN. tit. 17, ch. 17-5 (1971)

One of the weaker statutes concerning the control of pollution exists in Georgia where a nine-member board is created, whose members serve without salary (§ 17-504), and whose duty it is to devise a comprehensive plan for the abatement and control of pollution (§ 17-505(5)). This plan may include a permit system for those citizens wishing to start or increase a possible source of pollution (§ 17-510(2)). No mention is made of those persons who are already polluting and who do not intend to increase the source of that pollution.

The statute does say that it is illegal to pollute except as directed by the Board, but until the Board makes a determination against a particular person, that person is safe from restriction. The Act lacks an adequate fine system and power in the form of injunctive relief.

HAWAII—HAWAII REV. STAT. § 321.000 (1968)

Hawaii is unique among all the other states in that it has plenty of water, which is readily available without restrictions placed upon it by lower riparians.

Protection of the water of the state is included in the duties of the Department of Health, and although the simplistic code states that no one can pollute without a permit, it freely implies that where the ocean will sufficiently dilute any pol-

lutant, the person responsible for the discharge of that pollutant need not worry about state restrictions (§ 321.16). Such a view, dangerous in Hawaii, is even more lethal in the mainland states, where the Hawaii view of the situation is often shared.

IDAHO—IDAHO CODE § 39.00 (1961)

The five members of the Pollution Control Committee are political appointees of the Governor (§ 39.103) and receive no salary, although members are entitled to receive $25 per day expenses (§ 39-104). This amount clearly does not allow members to devote full time to the control of pollution.

ILLINOIS—ILL. REV. STATS. ch. 19 (1951), *as amended* 1969; replaced by ILL. ANN. STAT. ch. 111½, § 1001 (Smith-Hurd Supp. 1972); see closing paragraph of appendix.

As in other states, the Illinois State Sanitary Water Board is composed of government officials and appointees, all of whom are engaged in full-time occupation elsewhere. Section 145.3(e) creates the Water Pollution Control Advisory Council, composed of nine members representing the State Legislature, government, and special interests. The Board is to prepare a comprehensive plan for the control and abatement of pollution (§ 145.6(d)(4)).

In Illinois, it is unlawful to pollute water (§ 145.10) and all new or increased pollution requires a permit from the Board (§ 145.11). The violators of the Illinois Act or of any Board order face fines of up to $5,000 plus $200 per day of continued offense, as well as jail sentences of up to six months. In addition civil liability may arise for damages caused by the illegal pollution (§ 145.13). Section 145.14 indicates an interesting difference between the Illinois Act and most others in providing that it is the duty of the Attorney General to seek injunctive measures against polluters. There have been no cases wherein a writ of mandamus was brought against the Attorney General to encourage his office to do the duty prescribed in the code, but in theory, it seems such a writ would be successful.

Although Illinois has been involved in many cases concerning the pollution of Lake Michigan by the City of Chicago (Missouri v. Illinois, 80 U.S. 208 (1901); Missouri v. Illinois & the Sanitary Water District, 200 U.S. 496 (1906); Sanitary Water District v. United States, 266 U.S. 405 (1925); Wisconsin v. Illinois & the Sanitary District, 278 U.S. 367 (1929)), no cases arising directly from the statute have been reported. Keeping the harshness of the penalties in mind, it perhaps is fair to surmise that the absence of reported cases is due to a lack of enforcement rather than a result of good natured polluters accepting their penalties without protest.

INDIANA—IND. CODE § 13-1-0-0 (1971)

The Stream Pollution Control Board of Indiana was created in 1943, although older cases indicate a concern for the problems of pollution before that date. Of the seven members on the Board, four are gubernatorial appointees, the remaining three are the Secretary of the Board of Health, the Director of the Department of Conservation, and the Lieutenant Governor (§ 13-1-3-2). The appointees get $25 per day expenses and the Board meets six times yearly (§ 13-1-3-3).

The Board has statewide jurisdiction to control any pollution (§ 13-1-3-4), and has as its tools power to bring actions at law or in equity for the enforcement of the Act (§ 13-1-3-5). Although it is illegal to cause or contribute to pollution of the state's waters (§ 13-1-3-8), such pollution can be stopped by the Board

only after a determination is made that the person charged is actually polluting (§ 13-1-3-9). This requires the Board to either receive a complaint and investigate it, or find the source through general prevention checks. There appear to be no penalties for pollution, except for fines of $25-$110 and sentences of up to 90 days for failure to comply with a Board order. This is no incentive to the persons whom the Board has not yet discovered to stop. With the large amount of industry in Indiana, there is one provision which may be helpful. Section 6-1-8-2 provides for tax exemptions to facilities designed to abate or control pollution.

Early Indiana cases indicate that cities could pollute freely, so long as it was done via properly constructed sewer systems within the city, *see* City of Richmond v. Test, 48 N.E. 610 (Ind. 1897); City of Valparaiso v. Hagen, 54 N.E. 1062 (Ind. 1899). This theory did not apply to industries, *see* Western Paper Co. v. Pope, 57 N.E. 719 (Ind. 1900); Barnard v. Shirley, 34 N.E. 600 (Ind. 1893). The concept behind the *Richmond* and *Valparaiso* cases was that the cities were using the only practical means for disposal of wastes, and by applying the maxim of the greatest good for the greatest number, the plaintiffs had to subrogate their rights to those of the public. This rule started to change in the 1900's when the courts began to hold cities liable for damages from pollution where it was shown that they could have properly treated the wastes, but failed to. City of Frankfort v. Slipher, 162 N.E. 241 (Ind. 1928); N. Ind. Pub. Co. v. Vesey, 200 N.E. 620 (Ind. 1936); Zabst v. City of Angola, 190 N.E. 891 (Ind. 1934).

IOWA—IOWA CODE ANN. § 455B.000 (1971)

The 1961 Iowa statute established the Water Pollution Control Commission, consisting of the Commissioner of Public Health, Director of State Conservation, Director of Natural Resources, Director of the Department of Soil Conservation, a state university staff member, Secretary of Agriculture, five electors, representing industry, city government, farming and for the public at large (§ 455B(4)). Commission members collect $25 per day spent on department work (§ 455B.7) and are required to meet quarterly (§ 455B.8).

The Commission must prepare a comprehensive plan for the control and abatement of water pollution; but a duty not imposed by most other states requires an investigation of pollution activities when a petition signed by 25 citizens is filed or a complaint made by any state agency (§ 455B.9(3)). Among the powers of the Commission are the power to enjoin (§ 455B.23) and the power to impose fines of up to $100 "for each offense" (§ 455B.24).

Any altered, increased or new discharge needs a permit from the Commission (§ 455B.25). It would seem that such a general limitation would be effective, but such is not the case. This legislation covers farms and industries in Iowa, as well as cities. Many of the farms and industries are so small that they cannot expand operations, and thus do not increase pollution.

Despite the apparent strength of the Act, enforcement cannot be easy. The wording of this Act seems to reflect the view of many legislatures that increased pollution presents the real danger to the country, so the legislatures provide that all *increased* sources must be registered for possible restriction, but do not provide for control of present sources of pollution.

KANSAS—KAN. STAT. ANN. § 65.000 (1964)

The Kansas Act contains a great deal concerning pollution from mining and oil wells; all discharge from such operations needs a permit from the Control Commission. Other sources are not specifically mentioned, although it may be assumed that the provisions for fines of up to $1,000, plus $1,000 per day for continued violation for discharging without a permit, are applicable to these sources as well (§ 65-167). A weak point in this Act is the provision that a

polluter, once notified by the Commission, has from 30 days to 2 years to abate that pollution (§ 65-165).

KENTUCKY—KY. REV. STAT. § 224.000 (1971)

In Kentucky, the Water Pollution Control Commission created by § 224.030(1) consists of the Commissioner of Health, the Commissioner of Natural Resources, the Commissioner of Fish and Wildlife, the Commissioner of Mines and Minerals, the Commissioner of Commerce, the Attorney General, the Director of Reclamation, three citizens representing industry, city government and the Commonwealth, and three members of the general public at large. The Commission meets every 2 months (§ 224.030(6)) and receives no salary for its work (§ 224.030(3)). Since 1951, all sources of pollution must obtain from the Commission (§ 224.060(5)) and any discharge without such permit is "illegal" (§ 224.060(1)), although methods of enforcement are not made clear.

Kentucky is also a member of the Ohio River Valley Water Sanitation Compact (§ 224.190) which consists of representatives from Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Tennessee and West Virginia. Formed in 1936, the compact pledges that all signatories will cooperate in the control of pollution. Article VI of this pact states that all water being discharged into the Ohio River shall be treated to remove 45% or more of all suspended solids.

LOUISIANA—LA. REV. STAT. § 56.1431-1453 (1950)

The Louisiana Stream Control Commission consists of the Commissioner of Wildlife and Fisheries, the President of the State Board of Health, the Commissioners of Agriculture and of Conservation, the Director of the Department of Commerce and Industry and the Attorney General (§ 1431). The Act is relatively short. It states only that if discharge is injurious or in violation of a Commission order, it is termed pollution and subject to fines ranging from $25 to $1,000 and the added possibility of a jail sentence of up to one year for each day of continued violation.

MAINE—ME. REV. STAT. ANN. tit. 38, § 361-72 (1964)

The Maine Water and Air Environmental Improvement Commission consists of ten members appointed by the Governor. The Commission must include two members from each of five areas: manufacturing, city government, the general public, conservation, and the field of pollution control (§ 361). The members are paid only $10 for each day spent working on Commission projects and are required to meet only twice each year (§ 361). This situation appears to be less than an inducement to effective water pollution control work.

The Act classifies the waters of the state into four categories of qualities to be maintained; no disposal of wastes which will deteriorate the water quality level established in the classification will be allowed (§ 363). Since 1953 the Commission has prohibited pollution of any type without a permit (§ 413).

Maine is one of the few states that actually sets a time limit on the controlling of pollution. The statute requires that statewide pollution treatment must be completed, and all users of the state's water must treat wastes adequately, by 1976 (§ 45(1)). All cities in Maine must report once each year to the Commission, outlining their procedures for treating wastes (§ 452). Very few states require sources of pollution to report progress in controlling emissions; most states require the control agency to ferret out and analyze the many sources. Maine's act seems truly dedicated to the purpose of ending pollution.

MARYLAND—MD. ANN. CODE art. 43 § 387 (1971)

The State Board of Health of Maryland has jurisdiction of that state's water pollution. Each county is required to provide adequate sewage facilities, which include the safe and adequate treatment of sewage before discharge (§ 387c4(ii)). Upon a determination by the Board that a person's or county's treatment is inadequate, the Board has the power to order that adequate facilities be built or that all discharge from that source be stopped (§ 392).

All new or increased pollution, after the passage of the original Act in 1914, requires a permit and all industrial pollution may be ordered stopped until better treatment facilities are constructed (§ 397). Voluntary compliance with the Act is doubtful, since many industries can make more money paying the low fines, ranging from $5 to $50 per day with an initial fee of $10 to $500, than if they paid to install control devices.

MASSACHUSETTS—MASS. GEN. LAWS. ch. 21 (1966)

The Massachusetts Division of Water Pollution Control was established in 1966. The Division has the power to create pollution control districts (§ 28a) which have one year from the date of formation to implement a plan for the successful abatement of pollution. This is a considerable improvement over the legislation in other states which demands such plans but does not say when or how the plans should be put into operation.

Section 42 states without equivocation that no one may pollute, and those that do subject themselves to a fine of not more than $1,000. Since 1966, all new or increased pollution or discharge has been required to obtain a permit (§ 43) and injunctive relief is available against those who fail to do so (§ 44). The theory is that the greatest harm is done by increased pollution; if those who expand their operations, and thus their sources of discharge, are restricted, there is less urgency as to restricting other sources.

The early Massachusetts view toward municipal pollution was that proper and proportionate pollution of the water was a right held by all municipalities as against private lower riparian owners. Merrifield v. City of Worcester, 14 A.R. 592 (Mass. 1872); Anglim v. City of Brockton, 179 N.E. 289 (Mass. 1932). With the passage of the 1966 Act, however, this view has been altered to the point where the Division may at any time instruct a city to correct or cease its pollution (§ 45).

MICHIGAN—MICH. COMP. LAWS. ANN. § 323.1 (1967)

The Michigan Water Resources Commission, created in 1949, consists of the Director of the Conservation Department, the Commissioner of Health, the Highway Commissioner, the Director of Agriculture and three citizens representing industry, city government and conservation (§ 323.1). The Act states that after May, 1949, all new pollution requires a permit (§ 323.8(b)), and further, that all pollution (presumably without the permit) is illegal (§ 323.6(a)), as is sewage disposal (§ 323.6(b)).

Under definitions, "person" is defined to include city and industry (§ 323.11), and yet the penalties section (§ 323.10) specifically excludes cities from payment of fines for continuing pollution. This would seem to make cities subject to the provisions of the Act, but not subject to the penalties for non-compliance, unless section 323.5(a), which states that all preventive actions against harmful pollution may be taken by the Commission, is utilized.

The 1969 amendment to the Act appears to be an admission that the 1949 provision which required the registration of all new pollution was not effective

enough or quick enough. The amendment, section 323.6(b), requires industry to register its sources of discharge and file monthly reports on the effectiveness of the treatment of these discharges. This mandatory self-registration should save the Commission time, and make the staff more effective.

MINNESOTA—MINN. STAT. ANN. § 115 (1964)

The 1945 Minnesota Act, unlike most acts which require that new or increased discharge must obtain a permit from the control board, includes existing discharge (§ 115.07(2)) and allows injunctive relief against all those who fail to obtain a permit (§ 115.07(4)). The expected result of this Act would be the registration of all the discharge within the state since 1945.

Section 115.16 created within each Congressional District a Sanitary Region, and from each region the Governor is to choose two citizens, who will form the Water Pollution Control Advisory Committee (§ 115.17(1)), which will meet quarterly (§ 115.17(3)) and receive no salary (§ 115.17(2)). The statute also provides for the creation of semi-autonomous Regional Control Districts (§§ 115.15-115.37) and Municipal Control Districts (§§ 115.41-115.53), but creation of these additional regions is optional.

Minnesota is one of the few states with a relevant case. North Suburban Sanitary Sewer District v. Water Pollution Control Commission, 162 N.W.2d 249 (Minn. 1968), was an appeal by the Commission from a decision holding that the standards of pollution control adopted by the Commission—prohibition of the discharge of treated sewage effluent and of any major quantities of such effluent from the lower portion of the Minnesota-Mississippi River—were unreasonable in relation to the plaintiffs, whose point of discharge was to be 1.1 miles below the Minneapolis water intake point, and therefore safe.

The court held that the standards were reviewable when they affect a plan to build a treatment plant. The decision appeared to be based upon the public policy arguments that 1) the treated effluent was not harmful, 2) the cost of following the standards and re-routing the effluent was prohibitive, and 3) such re-routing, if done, would cause massive pollution at one discharge point. The decision is not really detrimental to the purposes of the Commission for the court states that as to sources of discharge other than the plaintiffs', the standards are reasonable.

MISSISSIPPI—MISS. CODE ANN. § 7106-111 (Supp. 1971)

The Mississippi Air and Water Pollution Control Commission, created in 1966, consists of the Director of the State Board of Health, the Game and Fish Commission Director, the State Oil and Gas Board Director, the State Plant Director, the Marine Conservation Board Director and four gubernatorial appointees, one representing city government, two from industry, and one from a wildlife group (§ 7106-113). The Commission receives no salary, but members' expenses while on Commission work are paid (§ 7106-113(d)).

The Act has the usual provisions for meetings (quarterly, § 7106-114), for the creation of a complete plan for the control and abatement of pollution (§ 7106-116(b)), and for permits for all new or increased discharge (§ 7106-118(b)(1)), but it differs from other legislation somewhat in that section 7106-122 requires all persons (which includes municipal and industrial corporations, § 7106-112.3(b)) who discharge to pay a yearly inspection fee of from $50-$1,000 for the service, depending on the size of the operation. With such yearly inspections, deficiencies in a pollution control system may be discovered and a Commission order issued, instructing the owner to alleviate the problem. At this point section 7106-127(a) becomes relevant, stating that all who violate such orders are liable for a fine of $50 to $5,000, or a jail sentence of up to one year for each day of violation, or both, in addition to civil liability caused by the pollution (§ 7106-127(b)).

MISSOURI—Mo. ANN. STAT. §§ 204.010-204.470 (1972)

The Missouri Act creates a Board that consists of six gubernatorial appointees, three of the Governor's political party and three of the opposing party (§ 204.070(1)), representing agriculture, industry, city government, conservation, mining and the public at large (§ 204.070(2)). The members collect no salary (§ 204.070(3)) and meet quarterly (§ 204.070(5)). The Board is to provide a comprehensive plan for the control and abatement of pollution (§ 204.080(4)) and all new or increased pollution needs a permit (§ 204.030(2)).

MONTANA—MONT. REV. CODES ANN. §§ 69-4081-69-4827 (1970)

The Montana Pollution Control Council is composed of the Director of the Department of Health, the Director of the Fish and Game Department, the Director of the Water Conservation Department, the Commissioner of Agriculture, and eight gubernatorial appointees, one each representing agriculture, city government, labor, fishing and sport, soil and water conservation, water recreation, and two from industry (§ 69-4810). The Council receives no salary, though the eight appointed members are paid $20 for each day spent on Council business (§ 69-4811), and is required to meet only twice yearly (§ 69-4812(2)). All new or increased discharge needs a permit (§ 69-4806(2)) and it is unlawful for any person to pollute (§ 69-4802(5)), "person" including municipal and industrial corporations (§ 69-4802(10)).

In 1918, when pollution was treated as nuisance for purposes of legal actions, the Montana court construed the Montana Revised Code as concerning anything which is "injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property." Cavanaugh v. Corbin Copper Co., 174 P. 184, 195 (Mont. 1918). It appears that the official attitude toward pollution has become less, not more, stringent.

NEBRASKA—REV. STAT. NEB. ch. 71, art. 30 (1957); replaced by NEB. REV. STAT. § 81-1500 (Supp. 1971); see closing paragraph of appendix

The Control Act, like so many others, depends on strict enforcement for its effectiveness. Section 71-3003-1 creates the Water Pollution Control Council, composed of the Director of Health, Secretary of Game and Parks, Director of Water Resources, Nebraska Soil and Water Commissioner and six gubernatorial appointees, representing the food industries (two members), one from other industries, one from agriculture and two from city government.

The Act has the expected phrases: the Council shall develop a plan for the control and abatement of pollution (§ 71-3005(2)); it is unlawful to pollute (§ 71-3007(1a)); all new, modified or present discharge needs a permit from the Council to continue (noteworthy here is that even existing discharge sources need a permit (§ 71-3007(2)); violations of the Act or an order results in a fine of up to $500, not less than $100, plus $10 per day of continued violation (§ 71-3009(1)); and injunctive relief is available (§ 71-3009(4)).

NEVADA—NEV. REV. STATS. ch. 445 (1949), *as amended* 1963; replaced by NEV. REV. STAT. § 445.000 (1971); see closing paragraph of appendix

The Nevada Act is one of the most elementary acts in the country. The State Board of Health governs pollution (§ 439.200), and only three provisions of the Act are worthy of note. It is unlawful to pollute, with unlawful pollution drawing fines of $50 to $500 (§ 445.010). This weak provision is further weakened by section 445.020, which states that the Attorney General *may* prosecute polluters

with the Governor's consent. This requires 1) that the Attorney General's office has the time to devote to pollution and chooses to do so, and 2) that the Governor consent to the prosecution of the party involved. Theoretically, if the alleged polluter is a great state industry, or political power in the Governor's party, the Governor could prevent the prosecution of the pollution.

The Act does state that no new discharge can be made without a permit (§ 445.080), but with a discretionary prosecution system, this prohibition would appear to be extremely weak.

NEW HAMPSHIRE—N.H. REV. STAT. ANN. §§ 149:1-149F:2 (1964)

The Water Supply and Pollution Control Commission under the New Hampshire Act instead of consisting of busy state officers and industry leaders, is composed of persons whose jobs depend a great deal upon water purity and who will be inclined to devote their time and energies to controlling pollution. The members under section 149.21 represent the public, the Director of Public Health Services, the Director of Fish and Game, the Director of Parks, the Director of the Planning and Research Division of the Department of Economic Development, the Chairman of the Water Resources Board, the Department of Safety, two representatives of industry (hopefully to keep the Board from completely ignoring the interests of industry in favor of the interests of clean water), a representative of the vacation and home industry, a representative of agriculture, and a representative of a city water works. No salary is paid, but the members receive their expenses (§ 149.2I).

The Commission is directed to create classes of waters throughout the state according to their condition, the ability to repair the condition, and the expectations of future uses (§ 149:3), and anyone who violates the uses of each class will pay a fine of not more than $1,000 per day (§ 149:19). All discharge needs a permit (§ 149:8III), and anyone who is required to install control equipment receives a tax exemption on the device. The only reported case concerning the statute (hopefully as a result of a lack of appeals rather than a lack of enforcement) was Plymouth Fire Dist. v. Water Pollution Comm'n, 167 A.2d 677 (N.H. 1961), which stated that the Act was constitutional.

NEW JERSEY—N.J. REV. STAT. §§ 58:10-1-58:10-45 (1966)

The New Jersey Water Control Act has been effective since 1899. The language of the Act is strong enough: no one may pollute (§ 58:10-1); no city or industry can pollute after 1908 (§ 58:10-5); the discharge of non-permitted effluents is prohibited (§ 58:10-10); discharge from new industry needs a permit (§ 58:10-17); and refuse from oil refining cannot be discharged into water (§ 58:10-22). Article 8 (§ 58:10-36) and 9 (§ 58:10-42) of Chapter 10 state that pollution of the state's major waterways is prohibited.

The immediate situation in New Jersey seems to indicate great activity toward the enforcement of the Act. In City of Newark v. New Jersey Health Dept., 262 A.2d 718 (N.J. 1970), the court made clear that the establishment of standards are within the police power of the state Water Control Board. A call to the state office indicated that the enforcement activity is new, and the present Board is trying to undo the extensive damage done by the non-enforcement policies of previous Boards.

NEW MEXICO—N.M. STAT. ANN. § 75-39-1 (1970)

The New Mexico Water Quality Act, although very short, may be successful if strict enforcement is maintained. The Water Quality Control Commission is composed of the Director of the Department of Health, the Director of the State

Fish and Game Commission, the State Engineer, the Commissioner of Oil Conservation, the Director of Parks and Recreation, the head of the Department of Agriculture, and one citizen at large (§ 75-39-3). The Commission must prepare and adopt a comprehensive control program (§ 75-39-4b); to help in the enforcement of the program, the Commission has use of injunctive relief (§ 75-39-9a) and a civil fine of up to $1,000 per day plus any expenses incurred in cleaning up prohibited discharge (§ 75-39-9b).

NEW YORK—N.Y. PUBLIC HEALTH LAW § 1205 (McKinney 1971)

Section 1205 of the New York Act sets up various classes of water (dependent upon use) within the state, with each class to be maintained by limiting the types and amounts of discharge that are permitted. The Act also provides that it is unlawful to pollute (§ 1220). After a 1949 amendment, all persons discharging without a permit were directed to stop, and all new or altered discharge needed a permit (§§ 1223, 1222, 1224).

NORTH CAROLINA—N.C. GEN. STAT. § 143-212 (1964)

The North Carolina Department of Air and Water Resources was created in 1959. The Board seems to have a functional membership of persons interested in maintenance of resources: two representatives from agriculture, two from industry, two experts on municipal pollution problems, one from city management, one from the Fish and Game Department, one from Public Health, one physician and three from the public at large, all appointed by the governor (§ 143-213(b)). The members receive no salary but are allowed expenses and a per diem allowance (§ 143-213(d)).

NORTH DAKOTA—N.D. CENT. CODE § 61-28 (1971)

The North Dakota Act, like the North Carolina Act, is an echo of other acts. The Board is made up of people who may be expected to be truly interested in the solution of the pollution problems. As in other acts it is the duty of the Board to prepare and effect a plan for the control and abatement of pollution (§ 61-28-14); it is unlawful to pollute (or to discharge below stream standards) (§ 61-28-06); all new, increased, or altered discharge needs a permit (§ 61-28-06); and provisions are made for civil remedies (§ 61-28-07) and injunctive relief (§ 61-28-08(2)).

OHIO—OHIO REV. CODE § 6111 (Supp. 1972)

The 1952 Ohio Water Control Act seems to have more than the average vitality. The Control Board, composed of the Directors of the Department of Health, Natural Resources, Commerce and Agriculture, along with two citizens at large, receives a salary in addition to expenses (§ 6111.02). This naturally allows the members to devote more time toward the problem. In addition to the provisions making pollution illegal (§ 6111.04), and instructing the Board to create a comprehensive plan for the control and abatement of pollution (§ 6111.03), the Act has incorporated the concept of allowing tax exemptions on equipment installed for the purpose of controlling pollution (§§ 6111.31, 6111.34, 6111.35). The penalty provisions also seem potentially effective, with fines not to exceed $500, or jail sentences not to exceed one year for each day, or both.

Although no cases have been reported concerning the present Act, the language of the Act indicates that the Ohio court has reversed its earlier view of pollution. During the early 1900's, the court felt that pollution from any source, once stopped, would disappear as the land repaired itself, and thus would

not grant permanent damages (Straight v. Hover, 87 N.E. 174 (Ohio 1909); Salem Iron Co. v. Hyland, 77 N.E. 751 (Ohio 1906)).

OKLAHOMA—OKLA. STAT. tit. 82, § 901 (1970)

In 1968 the Oklahoma Pollution Control Act created a Board consisting of the Commissioner of Public Health, the President of the State Board of Agriculture, the Director of the Water Resources Board, the Director of the Wildlife Conservation Department and the Chairman of the Corporation Commission. No salary is paid, but members are reimbursed for their expenses (§ 1071(a)).

In the early 1900's, while other courts stated that no damage is permanent unless the pollution causing it is permanent, the Oklahoma court in Union Oil & Mining Co. v. Bowman, 289 P. 296 (Okla. 1930), stated that even though the pollution is not permanent, as a practical matter, considering the time necessary for nature to repair damaged land, the damage would be treated as permanent.

OREGON—ORE. REV. STAT. § 49 (Replacement Part 1971)

The Oregon Environmental Quality Act is relatively new, but it does not differ from the older acts except that the five member Board receives a small salary (§ 449.016).

PENNSYLVANIA—PA. STAT. ANN. tit. 35, § 69 (1964)

The Pennsylvania Water Control Act, passed in 1905, began with the proposition that Pennsylvania has more pollution in its water than any other state (§ 691.4) and that the discharge of wastes cannot be a natural nor a riparian right (§ 691.3). Amendments to the Act have modified it to the point that it now provides that sewage must be disposed of only under the Act (§ 691.201); all present pollution must cease (§ 691.202); violation of Section 691.202 subjects the violators to a fine of $25-$100 plus $10 for each continued day of violation (it may be cheaper to pay this fine than install control equipment); all present discharge needs a permit from the Commission to continue (§§ 691.205, .206, .207); and anyone who pollutes must stop when ordered to by the Commission (§ 691.302). No one may discharge into waters classified as "clean" by the Commission (§ 691.306), and those that violate this section face a fine ranging from $100-$5,000 and the possibility of one year in jail (§ 691.309), although this provision specifically excludes municipalities from this penalty.

One of the strongest prohibitions is aimed at coal mines, which have long been the largest cause of pollution within the state. All coal mines need a permit to operate (§ 691.315) and those that operate without such permit, or outside the limits of such permits, face fines of $100-$5,000 and a year in jail.

The economy of Pennsylvania has depended to a large extent upon mining. The earlier view was that mining was a natural use of land and water and that social policy of the state required the protection of the coal industry. McCune v. Pittsburg & Baltimore Coal Co., 85 A. 1102 (Pa. 1913); Pfeiffer v. Brown, 30 A. 844 (Pa. 1895); Collins v. Chartiers Valley Gas Co., 18 A. 1012 (Pa. 1889); Pa. Coal v. Sanderson, 6 A. 453 (Pa. 1886); Clouse v. Crowe, 68 Pa. Super. 248 (1917). Because the state was mining-oriented, early actions against coal companies were expensive and hazardous if undertaken by private owners. Stevenson v. Ebervale Coal Co., 50 A. 818 (Pa. 1902); New Boston Coal & Mining Co. v. Pottsville Water Co., 54 Pa. 164 (1876); Little Schuylkill Navigation, R.R. & Coal Co. v. Richard's Adm'r, 57 Pa. 142 (1868). However, in 1924 the Pennsylvania court held in Pa. Ry. v. Sagamore Coal Co., 126 A. 386 (Pa. 1924) that the privilege (note: privilege, not *right*) to pollute by reasonable use did not extend to the draining of coal mine refuse into streams resulting in injury to a public water supply.

RHODE ISLAND—R.I. GEN. LAWS ANN. § 46-12-1 (1971)

The Rhode Island Act is similar to that of the other states. The Water Pollution Board, composed of the Director of Natural Resources and four citizens who are appointed by the Governor and who serve without salary (§ 46-12-2(b)), is empowered to create a comprehensive plan for the control and abatement of pollution (§ 46-12-4(a)); all new or altered discharge needs a permit (§ 46-12-4(b)); and the penalty for violating a Board act or order is not more than $500 and/or 30 days in jail for each day of continued violation (§ 46-12-14).

SOUTH CAROLINA—S.C. CODE ANN. § 70-101 (1962)

Section 70-103 of the South Carolina Act creates the Pollution Control Authority. Section 70-104 places the Board membership in the hands of the public, ably represented by the industries of the state (cotton manufacturers and paper), whose interests are presumably balanced by the inclusion of a practicing farmer, one city representative, one wildlife representative and two persons from the Board of Health. All the members are appointed and receive a small per diem compensation (§ 70-105).

The Board is empowered to minimize and abate pollution (§ 70-110(1)) by the creation and implementation of a plan for the control and abatement of pollution (§ 70-110(11)). Since 1952 all new or increased discharge within the state has been required to obtain a permit (§ 70-117) and violation of this or any other Board act or order results in a fine ranging from $100-$5,000 and the possibility of a jail sentence of up to one year for each day of continued violation (§ 70-133).

SOUTH DAKOTA—S.D. COMPILED LAWS ANN. § 46-25 (1967)

The South Dakota Act has a unique feature. In addition to the creation of the Committee on Pollution Control (composed of a representative from the Department of Health, the Chief Engineer of the Water Resources Commission, a representative from the Department of Game, and four electors, representing industry, livestock growers, livestock feeders and municipalities (§ 46-25-1)), the granting of injunctive relief against violators of Committee orders (§ 46-25-15), and the imposition of a fine up to $100 and perhaps one year in jail (§ 46-25-16), the Act states specifically that discharge into waters classed as "A" without a permit from the Committee is prohibited (§ 46-25-6). This would imply that discharge into waters *not* classified "A" *is* permissible without a permit, which would further imply that anyone can discharge into lower grade waters without informing the Board of the practice. The effect of this would be to destroy all waters that are not class A. While it is difficult to believe that a state legislature intended this meaning, the wording of the Act seems to permit this interpretation, and no case clarifying the Act has been reported.

TENNESSEE—TENN. CODE ANN. § 70-300 *et. seq.* (1945); replaced by TENN. CODE ANN. § 70-324 (1971); see closing paragraph of appendix

The Tennessee Act creates the Stream Pollution Control Board, which is composed of representatives from the Board of Health, the Conservation Department, the State Planning Department and four appointees from the public, two representing industry and two representing municipal government. The Board receives no salary, and no mention is made of reimbursing members for their expenses (§ 70-302).

Although the Board has the power to order pollution stopped or reduced, section 70-311 provides that any city ordered to stop a discharge is exempt if it cannot readily afford the equipment necessary to abate it.

It is unlawful to discharge pollutants into water contrary to standards set by the Board (§ 70-316), and violation of this provision may result in fines ranging from $50-$500 per day of continued violation (§ 70-317). But the Board must find the person violating the provisions, for no permit requirements will make him known to the Board.

TEXAS—VERNON'S REV. CIVIL STATS. OF TEXAS tit. 71 art. 4477-5, § 1.03 *et. seq.* (1965) *as amended* 1967; replaced by TEX. WATER CODE ANN. § 21.001 (Supp. 1972); see closing paragraph of appendix

The Texas Act provides that the Texas Railroad Commission is responsible for the control of pollution from oil and mining. Such pollution requires a permit from the Commission and the permit will be granted only if state Water Quality Standards are met (§ 1.10).

The Pollution Control Board of Texas receives no salary, but does get expenses (§ 2.05). The Act requires that all new or modified discharge since 1967 obtain a permit from the Board (§ 3.24). Violation of a provision or order of the Board will result in a fine ranging from $50-$1000 per day (§ 4.02).

Two cases from 1930 indicate the attitude of the Texas court toward suits by private owners against industrial pollution. In Sun Oil Co. v. Robicheaux, 23 S.W.2d 713 (Tex. Civ. App. 1930), the court held that unless plaintiff could prove the exact measure of damages caused by each individual industrial defendant, the action could not lie. In Abilene & S. Ry. v. Herman, 31 S.W.2d 682 (Tex. Civ. App. 1930), the opinion stated that a plaintiff must provide an expert witness to establish evidence of defendant's pollution and resultant damage. This had the effect of making a plaintiff's suit economically unfeasible. Perhaps the private person, represented by the State Board, will have better success now than in 1930. The possibility is there if the Act is enforced.

UTAH—UTAH CODE ANN. § 73-14 (Supp. 1971)

The Utah Act was passed in 1953, although the Committee on Water Pollution was not created until 1957 (§ 73-14-2.5). It incudes the Director of the Division of Health, and eight gubernatorial appointees representing the mineral industries, the food industry, some other manufacturing industry, city government, fish and wildlife and two citizens at large. It meets quarterly without salary (§ 73-14-3).

A problem arises with this Act because no fines are provided, just injunctive relief. Injunction is a harsh remedy, and if enforcement were carried out, the result could be a widespread crippling of industry. If there is no enforcement, industry might ignore the Committee's requirements, assuming the Committee will not use the only weapon at its disposal.

VERMONT—VT. STAT. ANN. tit. 10 (1971)

The Vermont Act is one of the strongest pollution control acts in the nation. The Water Resources Board, composed of three members (§ 573), is instructed to put all the waters in the state into classes, with specific standards for each class (§ 902). There can be no discharge below the standards of the water supply without specific permission from the Board (§ 909(a)), and this permission will be in the form of a temporary permit, allowed only if the denial of such permit will work extreme hardship upon the appellant (§ 912(a)(c)(5)).

After July, 1971 no discharge may be made without a permit from the Board (§ 909(b)), and any violation results in liability for fines ranging up to $10,000 for each day of violation, or five years in jail, or both (§ 918). These

are the strongest penalty provisions found in any state's act. Injunctive relief is also available (§ 917(a)).

These penalty provisions give the Board virtually unlimited power to control and abate pollution throughout the state. Vermont is a state to watch for several reasons: 1) to see if the Board will indeed enforce the Act, 2) to see if appeals are successful in claiming penalty provisions are too strict, and 3) to see if industry exerts sufficient pressure upon the government to result in the easing of enforcement.

VIRGINIA—VA. CODE ANN. § 62.1 (Supp. 1971)

The Virginia Water Act created the Water Control Board (§ 62.1-44.8) which is composed of seven appointees including a representative from city government and industry. The Board receives no salary (§ 62.1-44.10) and meets four times yearly (§ 62.1-44.11). The Act is similar to all other states' acts in that all new or increased industrial discharge must have the approval of the Board (§ 62.1-44.16, passed 1950); injunctive relief is available against violators (§ 62.1-44.23); and violators face fines ranging from $100-$5,000 per day (§ 62.1-44.32).

WASHINGTON—WASH. REV. CODE § 90.48 (Supp. 1971)

The Washington Act prohibits the discharge of polluting matter (§ 90.48.080) and violation results in fines, jail sentences, or both, as well as civil liability for the costs of cleaning up the illegal discharge (§ 90.48.142). If oil is discharged contrary to the statutory prohibitilon (§ 90.48.320), the fine is as high as $20,000 (§ 90.48.350). Evidently, the legislature of Washington sees more danger in discharge of oil than from any other type of discharge. The Act also provides for tax exemptions on installation and maintenance of control devices.

WEST VIRGINIA—W. VA. CODE ANN. § 20-5a (1970)

The West Virginia Water Control Act instructs the Board to create a comprehensive plan for the control and abatement of water pollution (§ 20-5A-3(8)). To aid in such undertaking, all discharge is required to be registered with the Board (§ 20-5A-3(12)). Section 20-5A-5 reinforces this provision by making all discharge without a permit illegal. Injunctive relief is provided against violators (§ 20-5A-17). Violations, which are defined as pollution *or* disobeyance of a Board order, will be punished by a fine ranging from $100 to $1,000 and a jail sentence of up to six months. Willful violation results in an increased fine of $1,000-$10,000 and six months (§ 20-5A-19), as well as additional assessment for the damage caused by the illegal discharge (§ 20-5A-19a).

WISCONSIN—WIS. STAT. ANN. § 144 (Supp. 1972)

From early cases, it appears the Wisconsin courts have always had a rather enlightened view of water rights. Winchell v. City of Waukesha, 85 N.W. 668 (Wis. 1901), held that a city has no greater right to pollute than any other riparian owner, and added that the welfare of the private owners overcame the city's need to pollute. The court in Mitchell Realty Co. v. City of West Allis, 199 N.W. 390 (Wis. 1924), made the city pay private owners for the damage caused by the city's non-negligent pollution. The Wisconsin Water Control Act reflects this attitude toward pollution.

The Act is the only one to place a time limit on the completion of a plan to control pollution (§ 144.025(2)) (to have been completed by July 1968). After January 1969, no sewage plant may operate without a permit from the Board (§

144.025.2(1)). The Act requires that 12 regional control Boards be created by 1967 (§ 144.025(4)). No city is allowed to discharge untreated wastes or sewage, and, as of September 1970, all cities had to have full treatment facilities operating (§ 144.05). After December, 1965 the sale and use of non-biodegradable detergents was prohibited (§ 144.14). This is highly commendable, and, if enforced, should serve as a model act for other states.

WYOMING—WYO. STAT. ANN. §§ 35-166-35-200 (1959)

The Wyoming Act is an old one, dating from 1923. The Water Control Council is composed of the directors of various state departments and six appointed citizens representing industry, municipalities and the public at large (§ 35-184). The Act states that after 1923 no industry may discharge untreated wastes (§ 35-189) and no injurious discharge may occur (§ 35-188). Violations of these provisions will result in a fine of not more than $1,000 and the possibility of up to one year in jail (§ 35-195). For those discharges which do not "pollute," the Act provides less strict penalties. Section 35-196 provides that any industry discharge that affects aquatic life or agricultural use of water shall be fined $50-$100 per day with a possibility of up to six months in jail. Corporations existing in 1923 are specifically excluded from the provisions.

STATE AIR POLLUTION STATUTES

ALABAMA—ALA. CODE tit. 8, §§ 288-301 (1969)

The Alabama Act states that any air contaminant which unreasonably interferes with the enjoyment of life or property is air pollution (§ 290(a)), and such definition applies to the emissions of cities, industries, homes and vehicles (§ 290(c)). Violators are allowed up to seven years to abate illegal emissions after discovery by the Board (§ 295(c)). The only inducement to installing and maintaining pollution control equipment is the scheme of tax exemptions and deductions under sections 786(34)(N) of Titles 51 and 348(D).

The Air Pollution Control Commission consists of 12 appointed members, four from the general public, four physicians and four from industry, who serve with no salary (§ 291). It is the duty of the Commission to create a comprehensive plan for the control and abatement of air pollution (§ 292(d)). Since September 1969 all sources of pollution could operate only with a permit from the Commission, which was granted only when it was shown that a plan to abate the pollution was developed. Seven years were permitted for the full implementation of the plan (§ 295(c)). There is no mention of injunctive relief, but the range of the fines, $100 to $10,000, is wide enough to be effective (§ 297).

ALASKA—ALASKA STAT. §§ 18.30.005-18.30.250 (1969)

Under the Alaska Air Pollution Act a nine member Commission was created, consisting of the Commissioners of the Department of Economic Development, Fish and Game, Health and Welfare, Natural Resources, and five gubernatorial appointees (§ 18.30.015). The Commission meets twice yearly (§ 18.30.040) and serves without salary (§ 18.30.050). The Commission is directed to establish emission control requirements (§ 18.30.120), although exceptions to these requirements apparently may be had upon request (§ 18.30.170). The state will control emissions from vehicles and may require the installation and maintenance of control devices on them.

Violations, in general, result in fines of up to $1,000 per day of continuation (§ 18.30.230), but if the Commission adjudges a violation a nuisance, the resultant fine is only $10-$50 with a possible 5 to 25 days in jail (§ 18.30.250(c)).

ARIZONA—ARIZ. REV. STAT. ANN. §§ 36-1701-36-1720.01 (1956)

The Arizona Act appears to be strong legislation. The Board of Supervisors for each county is directed to inspect and report all sources of pollution (§ 36-773). Permits are required to operate any new source of emission since 1970 (§ 36-779.01). The Council may issue orders to abate air pollution (§ 36-783) or seek injunctive relief against any source (§ 36-787). Since 1969 all open air burning within the state is prohibited, and the penalty provisions for this section constitute an open ended "not under $50" (§ 36-789.01).

Section 36-1702(A) creates the Advisory Council of the Division of Air Pollution Control within the Department of Health. The Council has jurisdiction within each county which pays for Council work (§ 36-1706). Violation of Council standards results in a fine of not less than $50 (§ 36-1707.01), although before any proceedings begin the violator has time to correct the situation (§ 36-1709). The Board has further powers through the use of orders of abatement (§ 36-1711), granting of permit for exemption from standards (§ 36-1712), and fine provisions ranging from $50 to $1,000 per day with injunctive relief available (§ 36-1715).

ARKANSAS—ARK. STAT. ANN. §§ 82-1941 (1949)

The Arkansas Act is short, with only a few sections deviating from the usual approach. Although municipalities and industry are included in the Act, agriculture and animal raising, as well as burning for small dwellings, are specifically excluded from the provisions (§ 82-1934). Political subdivisions are prohibited from passing pollution laws (§ 82-1941), but provisions of the state Act would seem to be sufficient to insure clean air if they were enforced. It is illegal to use a source of possible air pollution without a permit; indeed, it is illegal to pollute at all (§ 82-1938).

CALIFORNIA—CAL. HEALTH & SAFETY CODE §§ 39020-39430 (West 1967)

Under the California Act, the Air Resources Board consists of 14 members (§ 39020) who serve without salary (§ 39021). The Board is to appoint an advisory council, each member receiving $50 per day for expenses (§ 39022). Under this Act counties may form their own Board (§ 39056) within the discretion of the Board of County Supervisors (§ 39310). Counties with such Boards may form regional Boards, subservient to the state board (§ 39350). All vehicles built after 1963 must have a control device, although cars built between 1963 and 1966 only need a limited control device (§ 39129(a,b)).

COLORADO—COLO. REV. STAT. ANN. §§ 66-24-1-66-24-5 (1963)

The Colorado Air Pollution Control Act creates a Board composed of one member of the Board of Health and eight appointees (§ 66-24-2(1)) who serve without salary (§ 66-24-2(4)), and whose duty it is to create a comprehensive plan for the control and abatement of air pollution (§ 66-24-3). The Colorado Legislature has helped the Board by requiring all sources of pollution to be registered (§ 66-24-3(2)).

When the Board has discovered a violator, it must notify the source to stop its discharge, but the source has up to six months to abate the pollution. If the pollution continues after six months, the Board may issue a stop and desist order, which becomes effective six months after issue. A total of one year passes, then, before a violator may be stopped (and it might, of course, take much longer than that for the initial "discovery" to occur) (§ 63-31-13).

A Variance Board, separate from the Control Board, was created to make determinations of whether or not exceptions to requirements are feasible under certain circumstances (§ 66-31-15).

CONNECTICUT—CONN. GEN. STAT. REV. §§ 19-505-19-522 (1967)

The Connecticut Clean Air Commission, set up under the Act, is composed of a doctor, not more than four representatives of industries emitting pollutants, and eight electors at large, all appointees (§ 19-506). All existing sources of discharge need to be registered, while all new sources must apply for a permit (§ 19-508(d)).

The Commission is given the power to "prohibit air pollution" (§ 19-508(a)) and is aided by section 19-516, which says the fine from the violation of a Commission order may not exceed $5,000 per week, and allows injunctive relief; section 19-512, which provides for regional commissions; and section 12-81 which gives tax exemptions for control devices installed after January 1967.

DELAWARE—DEL. CODE ANN. tit. 29, § 8001-8025 (Supp. 1970)

A series of governmental bodies is created under the Delaware Act. The Department of Natural Resources and Environmental Control (§ 8001) is composed of members of other state departments, such as Fish and Wildlife, Soil and Water, Parks and Environmental Control (§ 8002). The Division of Environmental Control contains the Council on Environmental Control (§ 8014) which is composed of gubernatorial appointees working without salary.

It appears, however, that the Delaware Air and Water Resources Commission does the work. It is composed of the various county commissioners, and the members receive no salary (§ 6002). This Commission creates the plan for control and abatement of pollution (§ 6203); seeks injunctive relief against violators (§ 6205); oversees the local control laws of local governmental agencies (§ 6207); and enforces section 6231 which states simply that no person shall pollute.

FLORIDA—FLA. STAT. ANN. § 403.001 (1967)

The Department of Air and Water Pollution Control (§ 403.045) has been given the power to prohibit pollution (§ 403.061), to make a plan for the control and abatement of pollution (§ 403.061(11)), and to require all discharge agents to register with the Commission (§ 403.061(15)). Section 403.101 states that all sources may register, with provisions for injunctive relief and civil liability for volators (§§ 403.131 and 403.141). It is illegal to pollute, and violators pay $1,000 per day and face a possibility of one year in jail (§ 403.161(1),(2),(3)). Enforcement is by local control Boards set up under the Act (§ 403.182).

One provision of this rather tough Act allows pollution on a semi-permanent basis if 1) no control device has been invented, 2) the resultant product or service is vitally necessary to the public, and 3) shutdown of the polluter's operation would place undue burden and hardship on him.

GEORGIA—GA. CODE § 88-900 (1967)

The Georgia Act is an example of a half-hearted attempt to confront the problem. But if the meager provisions of this Act were strictly enforced, the result could be clean air. The Department may form a plan for the abatement of control of pollution (§ 88-904), and may require all discharge to be registered (§ 88-903(2)). Exceptions to conformity with Department orders may be made under § 88-912. Violations of the Act are termed a misdemeanor.

HAWAII—HAWAII REV. STAT. § 322-61-322-79 (1968)

In the Hawaii Act, the Department of Health has the power to require that all possible sources of pollution obtain a permit to operate (§ 322-64(4)), with injunctive relief and civil liability up to $100 per week of continued violation for those who choose to disregard the Department's order (§§ 47-71, 47-72). The remainder of the Act states that county boards, when subject to the Department, are permitted.

IDAHO—IDAHO CODE §§ 39-2901-39-2923 (1961)

The Idaho Code is short, possibly because clean air is relatively common and faces no threat of extinction. The Air Pollution Control Commission, composed of five appointed members who serve without salary (§§ 39-2903 and 39-2905), is severely handicapped by the lack of power given to it by the Act. The only section providing sanctions against violators indicates that the polluter must be found by the Commission, since registration is not required. After a lengthy hearing, a date may be fixed for correction, and if the source continues to operate after that date, *then* the Commission may fine him up to $1,000 per day and apply injunctive relief (§ 39-2919).

ILLINOIS—ILL. ANNO. STAT. tit. 111½ § 240 (1963 *as amended* 1967 and 1969; replaced by ILL. ANN. STAT. ch. 111½, § 1001 (Smith-Hurd Supp. 1972); see closing paragraph of appendix

The Illinois Act creates the Air Pollution Control Board which consists of the Director of the Board of Health and eight appointees, including an engineer, doctor, agricultural representative, industrial representative, a private manufacturer, a labor representative, two citizens at large and a representative of city management. The Act demands that each member be actively engaged in his own profession while serving on the Board (§ 240.4); no member receives a salary for Board work.

The Board is to create a comprehensive plan for the control and abatement of air pollution (§ 240.5-1.1) and in so doing may create local boards when the need is evident (§ 240.5-2.2). Although not all sources must register, any new source must acquire a permit before it may operate (§ 240.6(d)). Exception to requirements of the Act may be granted at the discretion of the Board (§ 240.11), although violation of the Act results in an initial fine of up to $5000 plus up to $200 per day and the possibility of up to six months in jail, in addition to injunctive relief (§ 240.15).

INDIANA—IND. ANN. STAT. § 35-4601 (1969)

The Indiana Act creates an Air Pollution Control Board composed of seven members, all serving without salary (§ 35-4603). The Act provides that all cars containing pollution control devices must maintain those devices in operating condition (§ 35-4610(b)). All harmful discharges are contrary to this Act and must be stopped (§ 35-4605). The creation of semi-autonomous local control boards is allowed (§ 35-4608). Violation of any provision of the Act results in a fine of not more than $500 per day, although there is no indication of injunctive relief.

Although some acts could be effective with proper enforcement, this Act appears incapable of real effectiveness with or without enforcement.

IOWA—IOWA CODE ANN. § 136B.1 (1972)

The Iowa Act creates an Air Pollution Control Board composed of the Director of Health and eight gubernatorial appointees, representing engineering, private manufacturing, agriculture, labor, city management, and medicine, all of whom serve without salary (§ 3). It is the job of the Board to create a comprehensive plan for the abatement and control of air pollution (§ 4(2)) and in doing this local boards may be created (§ 4(12)). Under the Act, no equipment which causes or prevents possible pollution may be used without a permit (§ 5(7a)), although exceptions to any Board requirement may be granted on adequate grounds (§ 13).

The Act provides for injunctive relief (§ 11) and for fines ranging up to $200 per day. Three years after passage of the Act, implementation is still underway and full operation has not yet begun. Some of the largest polluters in the state are based in the same city as the Board, but the Board has not had time in the three years since it was created to put this legislation into operation.

KANSAS—KAN. STAT. ANN. § 65-3001 (Cum. Supp. 1971)

The Kansas Act creates an eight-member Air Quality Conservation Division within the Department of Health (§ 65-3003). The eight members represent the Department of Health, the Director of the Department of Economic Development, Department of Labor, Department of Agriculture, industry, city management, a city health department and the public at large and they receive no salary (§ 65-3004).

It is the job of the Division to create a comprehensive plan for the control and abatement of air pollution (§ 65-3005(5)) and powers granted to carry out the job seem extensive. The Division may set classes of air purity and all sources which do not fall within a specified class must register (§ 65-3007). The Division has power to regulate or prohibit the *use* as well as installation of sources of possible air contaminants (§ 65-3008). This results in the Division controlling present sources as well as new sources, although in particular circumstances the Board is empowered to grant exceptions to the requirements of the Act (§ 65-3013).

The remaining sections of the Act provide for the creation of local control boards (§ 65-3016), for the operation and maintenance of vehicle control devices (§ 65-3017), and for the imposition of fines in case of violations (§ 65-3018).

KENTUCKY—KY. REV. STAT. § 224 (Cum. Supp. 1968)

The eleven-member Commission created under the Kentucky Act is composed of representatives from the Health Department, Department of Commerce, Departments of Natural Resources and Agriculture, plus the Attorney General and six appointees (§ 224.420).

The Act provides that all discharge contrary to the provisions of the Act is illegal, and that all sources of possible air contamination must register *if* requested to do so by the Commission (§§ 224.330, 224.350), although exceptions to the Act may be granted for good cause (§ 224.410).

The Commission must prepare a comprehensive plan for the prevention and control of pollution (§ 224.430(6)), and the system created to aid in enforcing the Act includes fines of not over $1,000 and $1,000 per day plus injunctive powers; if the violation is willful, a jail sentence of up to one year may be imposed (§ 224.990).

LOUISIANA—LA. REV. STAT. ANN. § 40:2201 (1965)

The short Louisiana Act creates an Air Control Commission, consisting of the President of the Board of Health, Director of the Board of Commerce and Industry,

the Commissioner of Agriculture, and four appointees, each currently engaged in his field (a doctor, a private manufacturer, an engineer and a city planner), who serve without salary and meet six times yearly (§ 2203).

The remainder of the Act states simply that the Commission shall create a comprehensive plan for the control and abatement of pollution (§ 2204(1)) to which exceptions may be granted (§ 2211). It provides for fines up to $2,000 per day and injunctive relief for violations (§ 2214).

MAINE—ME. REV. STAT. ANN. tit. 38, § 581 (1965)

Under the Maine Act, a Commission is to set standards (§ 585), and while exceptions may be granted (§ 587), no source of contaminants may be operated without a permit from the Commission (§ 590), and no discharge over standards will be tolerated (§ 591). The Act sets up adequate provisions for penalties and states that cities may control their own pollution if they wish, so long as the state standards are considered minimum requirements (§ 597).

MARYLAND—MD. ANN. CODE art. 43, § 690 (1971)

The Maryland Act creates the Air Quality Control Advisory Board which consists of an engineer, a chemical engineer, two manufacturing employees, a doctor and four gubernatorial appointees, all serving without salary (§ 695). It is the Board's job to set standards and achieve total compliance with them, and violation of a Board act or order will result in a fine of not more than $10,000 per day (§ 703(a)).

MASSACHUSETTS—MASS. ANN. LAWS ch. 111, § 142 (1967)

The Massachusetts Act is a scattered, confusing piece of legislation. Section 142B creates the Air Pollution Control District, and section 142C provides that local districts are permissible, but all districts must meet federal standards in order to get federal aid (§ 142D). All equipment used for controlling air pollution is tax exempt. After due notice to cease, the Board must fine the alleged polluter. Violators can be fined no more than $50 on the first offense, while second offenders may be fined up to $100 (§ 142A). These provisions are clearly inadequate, for any sources which would continue to pollute after notice is given to cease should be enjoined from further operation, and some polluters could bear a daily fine of $100 per day better than the cost of installation and maintenance of control apparatus.

MICHIGAN—MICH. COMP. LAWS § 336 (1967)

The Michigan Act creates the Air Pollution Control Commission, consisting of the Commissioner of Health, the Directors of Conservation and Agriculture and six citizens: two representing industry, two from city government and two from the general public. Three of the last six must be a doctor, an engineer and a pollution control officer (§ 336.13(2)). No salary is paid. The Act gives the Commission the power to control air pollution as well as to create a comprehensive plan for the control and abatement of such pollution (§ 336.15). It provides that exceptions to Board orders may be made, but violations of such orders result in fines of up to $500 plus $100 per day (§ 336.26).

MINNESOTA—MINN. STAT. ANN. § 116 (1967)

The Minnesota Act states that no member of the seven-man Pollution Control Agency can be a state or federal officer—all must be appointees (§ 116.02(1)).

The Agency is to adopt standards (§ 116.07), but exceptions may be made where necessary (§ 116.07(5)). Violations of standards or Agency orders will result in fines not over $100 per day or 90 days in jail.

MISSISSIPPI—MISS. CODE ANN. § 7106-111 (Supp. 1966), *amending* MISS. CODE ANN. § 7106-111 (1942)

The Mississippi Act incorporates the Water Control Act with the Air Pollution Act. The Air and Water Pollution Control Commission consists of the Directors of Sanitary Engineering, Game and Fish Department, and Water Engineers, the Supervisor of the Oil and Gas Department, the Director of the Plant Board, the State Marine Conservationist and four appointees, representing city management, industry, and wildlife (§ 7106-113). It is the job of this Commission to make a comprehensive plan for the abatement and control of pollution (§ 7106-116(b)).

All discharge needs a permit (§ 7106-118(b)(1)). Fines are regulated according to the size of the source of contaminant discharge (§ 7106-112), and all persons who discharge must pay a yearly inspection fee, ranging from $50 to $1,000, according to size (§ 7106-122). A violation of any act or order of the Commission results in a fine from $50 to $3,000 per day and the possibility of up to one year in jail, as well as civil liability for the cleanup costs.

MISSOURI—VERNON'S ANN. MO. STAT. § 203.10 (1965)

On its face, the Missouri Act is somewhat heartening, in that its Air Conservation Commission, consisting of the Director of Health and appointees representing industry, agriculture, labor, city management and the public at large (§ 203.040), must require all sources of air discharge to register with the Commission, giving full information in their reports (§ 203.050.2). This saves the tremendous amounts of time that some other states spend ferreting out the sources of discharge and the amount of contaminant discharge made by each source. To aid the Commission, cities and counties may form autonomous local control commissions, as long as standards set by these local boards meet minimum state standards (§ 203.140).

MONTANA—MONT. REV. CODES ANN. § 69 (1967)

The Montana Act places the Air Pollution Advisory Council within the State Board of Health. The Council's membership represents labor, agriculture, private manufacturing, the fuel industry, physicians, veterinarians, and conservationists, with additional members being a chemical engineer, a meteorologist and an urban planner (§ 69-3908). The Council has the duty to create a comprehensive plan for the control and abatement of pollution (§ 69-3909(b)). As soon as the Council has set standards, all sources of air contaminants are required to register to facilitate control (§ 69-3907(2)), and all installation or alteration of any source needs a permit to operate (§ 69-3911). Emission in excess of standards is illegal (§ 69-3913) although exceptions may be granted by the Council (§ 69-3916). Local boards are permitted, subject to approval by the Council (§§ 69-3909(8), 69-3919). Violation of standards or of any Council or board act or order may result in a fine up to $1,000 per day (§ 69-3921), although cooperation with the Council in the way of installing pollution control equipment will give the user of such device tax advantages (§ 69-3923).

NEBRASKA—NEB. REV. STAT. § 81-1530 (1971)

The Nebraska Act contains some good and bad provisions, which combined

result in an Act seemingly impossible to put effectively into action. The Air Pollution Council is heavily represented by industry; with these members are an engineer, a doctor, a farmer, representatives of county government and of city government and two citizens at large. Section 7 of the Act provides that the Council shall control air pollution, and in doing this will create a plan for the control and abatement of pollution, shall effectuate the purpose of the act, and shall see that all sources of possible air contaminants have a permit to operate. This sounds like an excellent provision, but it is followed by an unsatisfactory fine provision. After a violation is adjudged the violator has a full eighteen months to correct the situation. If the situation is not corrected, a fine of up to $5,000 may be imposed. No provision for injunctive relief is present and the implication is that anyone may pollute freely for eighteen months after he is initially adjudged a polluter.

NEVADA—NEV. REV. STAT. § 445 (1971)

The Nevada Act creates a largely industry-oriented group of appointees as the Air Pollution Control Advisory Council. Under the leadership of a member of the State Board of Health, representatives of agriculture, industry, mining, construction, contracting, public utilities, tourism, transportation, and cities, and two citizens at large work without salary (§§ 445-15, 445-17). The Act is unique in demanding the existence of local county boards (§ 445-21), but the remainder of the Act simply states that injunction is a remedy available to the Council (§ 445-33) and that any violation of a rule adopted by the Council is a misdemeanor (§ 445-40). So, while potentially effective local boards are set up under the Act, the deficiencies of the Act seem to far overcome the little good the boards might do.

NEW HAMPSHIRE—N.H. REV. STAT. § 125 (1967)

The Air Pollution Control Commission created under the New Hampshire Act is evenly balanced between industry and the interests of the less influential groups. Among the Commission's duties is the creation of a comprehensive plan for the abatement and control of air pollution (§ 125:81) and the setting of standards, to which exceptions may be made (§ 125:83). Thirty days after receiving notice from the Commission, an alleged violator of the standards must abate the discharge (§ 125:82), and further violation of any Act or order of the Commission results in either injunctive action (§ 125:85) or a fine amounting to $100 to $1,000 per day or both (§ 125:86).

NEW JERSEY—N.J. STAT. ANN. § 26:2C (1967), *amending* § 26:2C (1954)

The New Jersey Act creates the Clean Air Council within the Department of Health, consisting of seventeen members: representatives from the Department of Labor and Industry, the Office of the New Jersey Health Officers Association, the State Chamber of Commerce, the State Society of Professional Engineers, the Manufacturers' Association, the American Industrial Hygiene Association, the State League of Municipalities, the Freeholder's Association, and the New Jersey AFL-CIO, as well as six citizens, one of whom must be a physician (§ 26:2C-3). No salary is paid. By the Act, the Council is empowered to make all rules and codes necessary to prohibit air pollution (§ 26:2C-8) and require registration of all possible sources of air contaminants (§ 26:2C-9). Although buildings housing six or less families need not register with the Council (§ 26:2C-9.2), the operation of an altered, new or existing pollution control equipment must have a permit (§ 26:2C-9(b)). The remainder of the Act provides for injunctive relief

(§ 25:2C-19), for the creation of local control boards whose minimum standards must be at least equivalent to state standards (§ 26:2C-22), and for tax exemptions for the installation and use of pollution control equipment (§ 54:4-3.56).

Two innovative provisions of the Act provide that a Clean Air Scholarship Intern Program be implemented, granting free tuition to any person who agrees to serve with the council after graduation for three years (§ 26:2C-24), and that in any emergency situation, such as where a temperature inversion has occurred or may occur, the Governor may virtually end all emission indefinitely (§ 26:2C-29).

The fine provisions of this Act state that any willful violation of an emergency order will result in a fine of $100,000 with the added possibility of ten years in jail (§ 26:2C-33). Another provision calls for a fine of $25 to $100 for operating an auto emitting in excess of standards due to faulty control equipment (§ 39:3-70.2).

NEW MEXICO—N.M. STAT. ANN. § 12-14 (1967)

The New Mexico Air Pollution Control Agency, within the Department of Health (§ 12-14-3), has the duty to prevent or abate air pollution (§ 12-14-5). Local boards are permitted to control pollution, subject to the dictates of the state agency (§ 12-14-4). Exceptions may be granted to Agency-determined standards of emission (§ 12-14-8) and injunctions may be used in emergency situations (§ 12-14-9), but within the Act there is no mention of a fine system, nor of inspections, nor of required registration of sources nor of many other provisions one might consider vital to the effective control of air pollution.

NEW YORK—N.Y. PUB. HEALTH §§ 1264-93 (McKinney 1971)

The fact that New York, particularly New York City, has a serious pollution problem is widely known. The fact that it has an Air Pollution Control Board is not so well known. The Control Board consists of the Commissioners of Health, Agriculture, Commerce, Conservation and Labor, as well as four appointees including a physician, an engineer, a representative of industry and a representative of city management (§ 1268.1). No salary is paid (§ 1270) for work done at the quarterly meetings (§ 1272).

The Board has the common duty of preparing a comprehensive plan for the control abatement of air pollution (§§ 1271). In the plan the Board has made provisions for obtaining tax exemptions for real property equipped with operating control devices (§ 1277). Violation of any act or order of the Board subjects the violator to a fine of up to $200 per day of violation (§ 1286), and injunction may also be exercised against him (§ 1287).

Motor vehicles must meet rather stringent provisions. N.Y. VEH. & TRAF. §§ 301, 375 (McKinney 1970). Vehicles must be inspected once each year (§ 301) and such inspection must show that standard equipment pollution controls on vehicles from 1963 to the present must be properly maintained and operating (§ 375).

NORTH CAROLINA—N.C. GEN. STAT. §§ 143-211-143-215 (Supp. 1971)

The straightforward language of the North Carolina Act, and its strong provisions, indicates that the legislature not only passed anti-pollution legislation, but that it really expected such legislation to be enforced. The Department of Air and Water Resources consists of a physician, a representative from the State Board of Health, two agricultural representatives, two representatives of industrial production, two from city management, one from county government and three citizens at large (§ 143-214(a)), who serve without salary (§ 143-214(b)).

Among the duties of the Board are the creation of a plan for the control and abatement of air pollution (§ 143-215) and the setting of standards for emissions to prohibit or abate such pollution (§ 143-215.5). All new or altered sources of possible air contaminants must obtain a permit before operation may begin (§ 143-215.1(B)), and there can be no emission in excess of standards (§ 143-215.2).

The Board allows the creation of local boards, but these are subject to the orders of the state Board (§ 143-215.3). As to violations of any Board act or order, fines from $100 to $1,000 per day will be assessed with the added possibility of injunctive relief (§§ 143-215.6 and 143-215.8).

NORTH DAKOTA—N.D. CENT. CODE §§ 23-25-01 to 10 (Supp. 1971)

North Dakota has created a Pollution Control Agency which consists of state health officers, a state geologist, a member of the state highway commission and four appointees, including a representative of city management, the liquid and gas fuel industries, the solid fuel industry and one citizen at large (§ 23-25-02(1)). The remainder of the Act simply states that violation of any act or order of the Agency is a misdemeanor (§ 23-25-10) and that injunctive relief is available (§ 23-25-09). No mention is made of registration of sources, setting of standards, creating plans for the control of pollution, of motor vehicle restrictions, or tax advantages for the use of anti-pollution devices.

OHIO—OHIO REV. CODE ANN. § 3704 (Page 1971)

The Ohio Act is similar to many states' acts, in that the Air Pollution Control Board is located within the Department of Health and consists of the Director of Health and Development and three appointees, representing city management, industry and agriculture. No salary is paid (§ 3704.02). The Board is to develop a plan for the control and abatement of pollution (§ 3704.03) and all persons emitting in excess of standards must register with the Board (§ 3704.03(g)). No person may emit in excess of standards without a permit from the Board (§ 3704.05(a)). The Act provides that local boards subject to state supervision may be formed (§ 3704.11) and these boards may assess fines against violators of up to $500 per day.

OKLAHOMA—OKLA. STAT. ANN. tit. 63, §§ 2001-08 (1971)

Oklahoma creates a Council composed entirely of gubernatorial appointees: an engineer, a representative of general industry, a faculty member from a state university, representatives from the transportation industry and the petroleum industry, a farmer and a city management official (§ 2002(E)). The Act provides that the Council is to prepare a plan for the control and abatement of pollution (§ 200(C)(a)), and violations of any order of the Council or of local Boards (§ 2003) is termed a misdemeanor. Exceptions to standards set by the Council may be granted (§ 2002(J)).

OREGON—ORE. REV. STAT. §§ 449.001-449.995 (1971)

The stated purpose of the Oregon Act is to prevent new pollution and abate that which exists (§ 449.782). In order to accomplish this, the Act requires that all persons (individual or corporate, public or private) in control of a possible source of air pollution must register (§ 449.707(2)), and the Environmental Quality Commission may require all new discharges to be approved by the Commission before operation begins (§ 449.712).

Local boards are permitted under the Act, but regional boards seem to be

favored. A Regional Air Quality Control Authority exists with jurisdiction over 130,000 persons located within a contiguous land area (§ 449.855), and is virtually autonomous, although subject to state Commission review (§ 449.905). These regional boards may use the injunctive power granted under § 449.820 of the Act (§ 449.895), but it appears that only the state Commission may grant exceptions to standards (§ 449.810). Fines up to $500 per day may also be assessed (§ 449.990).

PENNSYLVANIA—PA. STAT. tit. 35, §§ 4001-15 (1964)

Under the Pennsylvania Act, the Department of Health, which must create a plan for the control and abatement of air pollution (§ 4002), has the power to order pollution from a particular source to cease within 30 days (§ 4004(4.1)) and may require new or altered sources of emissions to obtain a permit to operate from the Department (§ 4004(9)). The Air Pollution Control Commission, also within the Department of Health, is composed of the Secretaries of Health, Commerce, Community Affairs, Mines and Minerals, Agriculture, an engineer, two conservationists, two industrial engineers, and a member of the general public. Although no salary is paid, $50 per diem is provided (§ 4005). The Act provides for local Boards which are largely autonomous (§ 4006).

Concerning violations of the Act, it is unlawful to fail to comply with a Commission standard or order (§ 4008), and a first offense will result in a fine of $100 to $500 or 10 to 30 days in jail (§ 4009(a)). Second offenses result in stiffer fines: $500-$1,000 and the possibility of one year in jail (§ 4009(b)). Cities are specifically excluded from the fine provisions. Injunctive relief is available, but its application to cities is unclear (§ 4010).

The last provision of the Act allots $50,000 to the Commission to use during the first year of fulfilling the Act (§ 4013). Unfortunately, operations of this sort are expensive, and it appears that $50,000 would be totally insufficient to finance such an operation. Perhaps the hope is that the acute lack of funds may have the effect of encouraging vigorous enforcement of the Act in order to collect enough fines to operate the Commission.

RHODE ISLAND—R.I. GEN. LAWS ANN. §§ 23-25-1 to -22 (1968)

The Rhode Island Act creates an Advisory Air Pollution Board consisting of five appointees (§ 23-25-4(b)) whose job it is to develop a comprehensive plan for the control and abatement of pollution (§ 23-25-5(b)). Although no mandatory registration provisions are made, any person found to be polluting may be ordered to cease until corrected (§ 23-25-8). Violation of an order of the Board, which presumably includes violation of standards, results in a fine of up to $500 and the possibility of up to 30 days in jail (§ 23-25-14(a)), although variances (exceptions) may be granted upon appropriate request (§ 23-25-15). Semi-autonomous local and city boards are provided for (§ 23-25-18(b)) and the Act is one of the few that provide for a state-wide ban against open burning (§ 23-25-18(c)).

SOUTH CAROLINA—CODE OF SOUTH CAROLINA tit. 70, ch. 3 (1952); replaced by S.C. CODE ANN. § 63.-51 (Supp. 1971); see closing paragraph of appendix

The South Carolina Act is worded in a manner which makes enforcement possible, if the membership of the Pollution Control Authority exercises its power fully. The Authority, created with the Department of Health (§ 70-103), is composed of ten members: the State Health Officer and two members of the Board of Health, and appointees, including a cotton manufacturer, a representative

of the pulp and paper industry, a representative of wildlife conservation, a city management official, a farmer and two representatives of labor (§ 70-104).

The Act gives the Authority jurisdiction to abate and control all pollution within the state (§ 70-107), to prepare a plan for such control and abatement (§ 70-110(11)) and to inspect and approve or reject all proposed disposal systems (§ 70-110(20)). Any discharge in excess of established standards is illegal (§ 70-123.1), although exceptions to the standards may be granted (§ 70-123.3). Section 70-133 provides for the assessment of fines ranging from $500 to $5,000 and the possibility of up to two years in jail, and section 70-136.1 allows for injunctive relief against any violator.

SOUTH DAKOTA—S.D. COMPILED LAWS ANN. §§ 34-16A-1 to -63 (1971)

The Air Pollution Control Commission created under the South Dakota Act consists of the State Health Officer, the Directors of Industrial Development and the Department of Game and Fish, and four appointees, representing city management, industry management and the general public (34-16A-3). Operators of any sources of emissions must register with the Commission (§ 34-16A-19). The standards are established by the Commission (§ 34-16A-22), and exceptions to those standards may be granted (§ 34-16A-30 to 39). Local boards are permitted under the Act (§ 34-16A-25) and violation of an act of either a local board or the state Commission will result in a fine of up to $500 per day, with injunctive relief against the violator available (§ 34-16A-44).

TENNESSEE—TENN. CODE ANN. §§ 53-3408 to -3423 (1971)

The Tennessee Act differs little from the acts of most of the other states. It does provide that automobiles made before 1967 and trucks made before 1970 are not considered sources of air contaminants for the purposes of the Act (§ 53-3409(b)), but its remaining provisions echo other acts.

The Air Pollution Control Board consists of the Public Health Director, the Director of the Planning Commission and eight appointees (§ 53-3411). No salary is paid to the Board. The Board is to prepare a comprehensive plan for the control and abatement of air pollution (§ 53-3411(1)) and may require all sources which are suspected of containing air contaminants to register with the Board (§ 53-3411(7)). Exceptions to these provisions or to standards may be granted (§ 53-3415(c)) and cities may be exempted from the act entirely if the Board approves a control system which is developed and implemented by the city (§ 53-3415(d)). The enforcement provisions allow for use of injunctive relief (§ 53-3418) and state that violation of any Board act or order is a misdemeanor (§ 53-3419).

TEXAS—TEX. REV. CIV. STAT. ANN. art. 4477-5 (Supp. 1972)

The state of Texas, because of its population per acre and its lack of great centers of industry, has one of the smallest problems with air pollution of all the continental United States (excluding Alaska); yet the Texas Air Pollution Control Act is potentially more effective than the acts of other states.

The Board consists entirely of appointees including an engineer, a doctor, a representative of private industry, a city government official, a farmer and four representatives of the public (§ 2.02). It should be noted here that the general public is represented by a larger number than in any other Act and the representation of industry is one of the smallest found anywhere.

The Board may require all persons responsible for sources of emmission to register those sources (§ 3.03). The penalty for operation of unauthorized sources

ranges from $50 to $1,000 per day (§ 4.01) and injunctive relief is available (§ 4.02).

While Texas has been somewhat innovative in the construction of its Act, it is also one of the few states that has initiated an action against a violator of the Act. The court in Houston v. Int'l Mineral & Chem. Co., Civ. No. 767, 407 (District Court of Harris County, 55th Judicial District of Texas, decided June 4, 1968), assessed a fine of $17,500 against the Company and ordered it to cease operations until a suitable abatement program was submitted.

UTAH—UTAH CODE ANN. § 26-24 (1953) *as amended* (Supp. 1971)

The Utah Act, while less dynamic than the Texas Act, is still capable of being effective in abating air pollution. Within the Department of Health in the Air Conservation Council, composed of appointees including an engineer, a city government official, a physician, a farmer, representatives of the mining and fuel industries, and a member of the public at large (§ 26-24-4). This Council must establish standards for emission (§ 26-24-5(2)). Unlike other states' agencies, it requires sources to file periodic reports on emissions (§ 26-24-5(3)).

The Act states that it is illegal to pollute (§ 26-24-9(1)) or to operate a source without a permit from the Council (§ 26-24-9(2)), but the penalty provisions seem difficult to enforce and very time-consuming. Injunctive relief is available against those who fail to comply with a Council order within 30 days (§ 26-24-13), but it is not indicated whether an injunction may be used other than after a flagrant violation of a Council order. Violation of an injunction will result in a fine of up to $1,000 per day (§ 26-24-14), but this is the only mention of any provisions for fines. It seems other penalties would be needed to make enforcement of the Act an effective deterrent to pollution.

Perhaps the situation may be remedied by section 26-24-17, which provides for local boards, if consistent with the state Act. It is possible, though unlikely, that these boards might institute their own fines.

VERMONT—VT. STAT. ANN. tit. 10, § 351-70 (Supp. 1970)

Under the Vermont Act, the pollution control agency is the Board of Health (§ 353). The Board must create a plan for the control and abatement of pollution (§ 354(4)), establish standards (§ 354(11)), and determine whether or not proposed new or altered sources of emission must obtain a permit to operate (§ 356). Whether an exception will or will not be granted is up to the discretion of the Board (§ 361), as is the question of whether or not a local control agency may operate; local standards must be equal to or more stringent than the state's requirements (§ 364). The Board has no appointed members, which means that while special interest groups are not represented (industry, for example), the knowledge of pollution control problems that these groups often have is perhaps unavailable to the Board.

The remainder of the Act provides that all sources of emissions must register with the Board (§ 355(b)). Further pollution control devices are tax exempt (§ 369). As to penalty provisions, the only fine mentioned in the Act is assessed against automobiles which have been equipped with control devices, but whose owners have not maintained those devices. The fine is up to $2,000 (§ 366).

VIRGINIA—VA. CODE ANN. § 10-17.9 (Supp. 1971)

The Virginia Act creates an Air Pollution Control Board consisting of five appointed members (§ 10-17.11) who receive no salary but are allowed $20 per day expenses (§ 10-17.13). The Board makes the rules concerning air pollution (§ 10-17.18(b)) and may create air pollution control districts composed of a city

and a county, a large county, or two cities (§ 10-17.19(c)), which are semi-autonomous and may grant exceptions to control requirements on a local basis (§ 10-17.18(c)). Owners or operators of sources of air emissions which are suspected of being excessive may be required to file information with the Board to enable that Board to determine what, if any, measures must be taken against that source (§ 10-17.21), and failure to file when requested may make that operator liable to injunction or guilty of a misdemeanor (§ 10-17.23). The owner of a source which is in violation may be fined from $50 to $500 per day (§ 10-17.29).

WASHINGTON—WASH. REV. CODE § 70.94 (Supp. 1971)

The Washington Act appears to be one of the most complete and well-designed pieces of air pollution control legislation in force at the present time. The Air Pollution Control Board, created within the Department of Health, consists of the State Director of Health, a faculty member of one of the two state universities, a county commissioner, and representatives of labor (1), city management (1), agriculture (1), industry (2) and the public (1) (§ 70.94.300). The Board receives no salary but its expenses are compensated (§ 70.94.320). The Board is to devise minimum standards for acceptable emissions within the state, and local control Boards are allowed to be more, but not less, strict (§ 70.94.331).

The state is divided into five districts, such districts being determined on the basis of geographic situation, land use, population density, and so on (§ 70.94.011, as amended by § 48 of 1969 amendments). Each county may form its own air control authority (§ 70.94.053(1)), and multi-county authorities may be formed when determined to be necessary by the state board (§ 70.94.057). Each of the county and multi-county authorities is to make rules applicable to the area in controlling air pollution (§ 70.94.141(1)), and must create a comprehensive plan for the control and abatement of air pollution within the area governed (§ 70.94.141(6)). These local authorities may create classes of contaminants and require all sources within a class to obtain a permit to operate (§ 70.94.152).

Section 70.94.385 authorizes expenditure of state funds to aid the operations of the local control authorities. The state Board, to assure effectiveness of the local operations and to avoid misappropriation or ineffecient use of state funds, will hold hearings wherein each local authority will present its program and its results (§ 70.94.405).

The penalty provisions available to the Board are also available to the local authorities, such as injunctive relief against violators (§ 70.94.425) and a fine for violation of an act or order ranging from $100 to $1,000 per day with an additional possibility of up to one year in jail (§ 70.94.430). This provision was enlarged by § 53 of the 1969 amendment which provides for additional penalties of up to $250 per day of continued violation. If the necessity arises, the state Board may assume state-wide authority over a particular type of emission or contaminant which it considers to be particularly dangerous or offensive (§ 70.94.395).

WEST VIRGINIA—W. VA. CODE ANN. § 16-20 (1966), *as amended* (Supp. 1972)

The West Virginia Act creates an Air Pollution Control Commission consisting of the Directors of Health and of Agriculture and five appointees, two representing industry and three from the public at large (§ 16.20-4). No salary is paid, but expenses of up to $50 per day spent on Commission affairs are reimbursed (§ 16.20-4). The Commission is "empowered" to develop a means to control air

pollution (§ 16.20-5), and the job is aided by a statutory prohibition against air pollution (§ 16.20-3).

A determination by the Commission that a source must be abated or controlled will result in an order to the operator to do so. If the unabated emissions continue after a reasonable time, the order of the Commission is considered violated, and the operator becomes subject to fines ranging up to $1,000 per day (§ 16.20-8) as well as to an injunction (§ 16.20-9).

WISCONSIN—WISC. STAT. ANN. § 144.30-46 (Supp. 1972)

The Wisconsin Act, though short, has some potentially effective provisions. The Air Pollution Control Advisory Council, whose duty it is to prepare a comprehensive plan for the control and abatement of pollution (§ 144.36), consists of seven appointed members, who receive no salary (§ 144.37). This Council is to classify those sources that are or may be injurious and require operators to register with the Council, thus avoiding the time-consuming discovery of these sources (§ 144.38(b)). All new or altered discharge must obtain a permit from the Board (§ 144.39). Motor vehicles equipped with control devices must have those devices maintained (§ 144.42), although the Act appears to lack effective penalty provisions for violations of any of the above provisions. Local boards are allowed under the Act, although no provisions for state aid seem to have been included in the Act (§ 144.41).

WYOMING—WYO. STAT. ANN. § 35-487-502 (Supp. 1971)

The Wyoming Act is typified by the appropriation of only $16,900 to carry out the Act in the first year of existence of the Air Resources Council (LAWS OF WYO. ch. 186, § 17 (1967)). The Council consists of the Director of the Board of Health, the Commissioner of Agriculture, the Chairman of the Land and Water Conservation Department and six appointees (§ 35-490). This Council is to establish standards for emission (§ 35-494) and prepare a comprehensive plan for the control and abatement of air pollution (§ 35-491). The penalty provisions of this Act are less stringent than those of most states; violation of an act or order of the Council results in a fine of up to $750 per week and the possibility of injunction (§ 35-500).

NOTE CONCERNING RECENT DEVELOPMENT

Since this article was written, several states have enacted new statutes dealing with pollution. Undoubtedly much of the impetus has come from federal action in the field by the Environmental Protection Agency and greater public awareness of the size and effects of pollution problems facing the country.

An analysis of these acts indicates several broad trends which are common to most of the new statutes. Rather than review all the new acts, a summary of these trends will be given along with representative samples. Perhaps one of the most noticeable changes can be seen in the statements of policy which exhibit an increased interest in a total systems approach to the pollution problem. Thus the intended scope of governmental action has been broadened from concern with dangerous water and air pollution to that shown by Alaska's new Environmental Conservation Statute: "It is the policy of the state to conserve, improve and protect its natural resources and environment and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well-being." The increased awareness of pollution has also led to a regulation of more forms of pollution. The Illinois Environmental Control Act attempts to cover not only recently recognized types of pollution, but also forms which may arise if projected technological developments

materialize (*i.e.*, Title II Air Pollution, Title III Water Pollution, Title V Land Pollution, Title VI Noise, and Title VII Atomic Radiation). Since the public has become increasingly aware of pollution problems, it is not surprising to find the boards or councils created or modified by the new acts have a greater diversity of membership than previously. Nebraska raised the number of members on the Environmental Control Council from ten to sixteen and markedly altered its composition. (The council is now composed of one representative from the following: food industry, conservation, agricultural processing, petroleum industry, chemical industry, heavy industry, power companies, crop producers, labor, pollution engineers, physicians knowledgeable in health aspects of pollution, county government, metropolitan municipal government, smaller town government, livestock industry, and public at large.) Needless to say, the diversity of interest groups is great. The earnestness of the new acts is apparent on the mundane level as well. Previously most boards were not compensated, but the new acts provide some remuneration. (Tennessee's old act specifically prohibited payment, while the new one provides $40 per day and travel expenses to board members who are not state officials.) The fine schedules have not been altered appreciably. This is not surprising since they have had the potential for being very high, as most have a per day violation. However, the new acts commonly include a provision allowing the state to recover damages to nature resulting from pollution. This raises the spectre of substantial civil recoveries in cases involving large fish kills and the like. The South Carolina statute is typical: "Any person who discharges . . . [pollutants] . . . into the waters of this state . . . to the extent that the fish, shellfish, aquatic animals, wildlife or plant life indigenous to or dependent upon . . . [water] . . . or any property damaged or destroyed shall be liable to the state as may be proved." While the new statutes exhibit greater awareness of pollution problems, the basic approach has not been altered. Administrative bodies are created to promulgate standards, inspect for violations, and enforce the standards through administrative fines or court action. Whether a reinforcement of past machinery will be effective remains to be seen. Clearly, however, different approaches are not being taken, and the system of fines and injunctive relief continues to be the standard means of controlling pollution.

SYMPOSIUM ON THE NEW KENTUCKY BUSINESS CORPORATION ACT

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